SHOUT
SHARE
IT

59.82:06(42)

FOR THE PEOPLE
FOR EDUCATION
FOR SCIENCE

LIBRARY
OF
THE AMERICAN MUSEUM
OF
NATURAL HISTORY

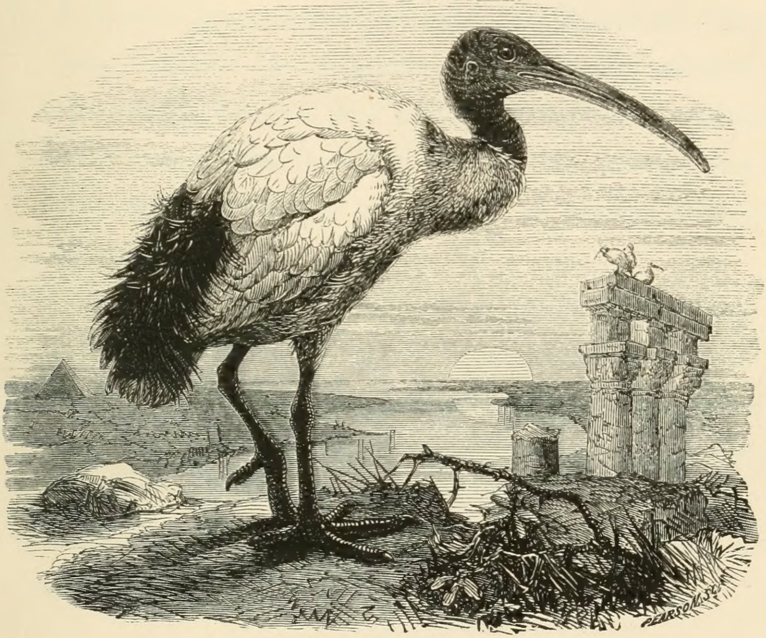
AMERICAN MUSEUM
CENTRAL PARK
NEW YORK
NATURAL HISTORY

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY
ALFRED NEWTON, M.A.,
PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY
IN THE UNIVERSITY OF CAMBRIDGE,
F.L.S., F.Z.S., ETC., ETC.



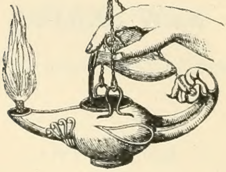
VOL. III. 1867.

NEW SERIES.

> Ibidis interea tu quoque nomen habe!
> —Ovid.

LONDON:
JOHN VAN VOORST, 1 PATERNOSTER ROW.
1867.

ALERE FLAMMAM.



PRINTED BY TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.

PREFACE.

It is with great satisfaction that the Editor of 'The Ibis' regards the valuable aid, so freely rendered him during the past year by Ornithologists in almost every part of the world, as evincing the interest they take in the welfare of the Journal he has the honour to conduct.

Amongst those to whom his gratitude for such help is due, he must especially mention Mr. OSBERT SALVIN, who, in the Editor's temporary absence from England, very kindly undertook to bring out the Number for July—a task which he is sure the readers of 'The Ibis' will agree with him in considering to have been most efficiently performed.

A. N.

Magdalene College, Cambridge.
September 1867.

BRITISH ORNITHOLOGISTS' UNION.

1867.

Ordinary Members.

John H. Barneby-Lutley, M.A.; Brockhampton, Herefordshire.

Robert Birkbeck, F.Z.S.; 65 Lombard Street, London.

Henry Buckley, F.Z.S.; Edgbaston, Birmingham.

William Thomas Hodgetts Chambers-Hodgetts; Hudscott, Devon.

John H. Cochrane; Dunkathel, County Cork.

Arthur William Crichton, B.A., F.L.S., F.Z.S.; Broadward Hall, Salop.

Henry Eeles Dresser, F.Z.S.; 7 New Broad Street, City, London.

Henry Maurice Drummond-Hay, C.M.Z.S., Lieutenant-Colonel, Royal Perth Rifles; Seggieden, Perthshire.

Henry John Elwes, F.Z.S., Scots Fusilier Guards; 41 Portman Square, London.

George Gooch Fowler, B.A.; Gunton Hall, Suffolk.

Henry Elliott Fox, B.A.; 21 Brondesbury Villas, Kilburn, Middlesex.

Frederick DuCane Godman, F.L.S., F.Z.S.; 55 Lowndes Square, London.

Percy Sanden Godman, B.A., C.M.Z.S.; Borregaard, Sarpsborg, Norway.

John Henry Gurney, F.Z.S., &c.; Catton Hall, Norfolk.

Rev. William Henry Hawker, M.A., F.Z.S.; Ashford, Sussex.

Wilfrid Hudleston Hudleston, M.A., F.Z.S.; 21 Gloucester Place, Portman Square, London.

Arthur Edward Knox, M.A., F.L.S., F.Z.S.; Trotton House, Sussex.

Right Hon. Thomas Lyttleton, Lord Lilford, F.L.S., F.Z.S., &c.; Lilford Hall, Northants.

Alexander Goodman More, F.L.S., &c.; 3 Botanic View, Glasnevin, Dublin.

Edward Clough Newcome; Feltwell Hall, Norfolk.

Alfred Newton, M.A., F.L.S., F.Z.S., &c.; Magdalene College, Cambridge.

Edward Newton, M.A., F.L.S., C.M.Z.S.; Auditor-General, Mauritius.

John William Powlett-Orde, F.Z.S., late Captain 42nd (Royal Highland) Regiment; Auchnaba House, Argyllshire.

George Dawson Rowley, M.A., F.Z.S.; 5 Peel Terrace, Brighton.

Osbert Salvin, M.A., F.L.S., F.Z.S.; 16 The Grove, Boltons, London.

Philip Lutley Sclater, M.A., Ph.D., F.R.S., F.L.S., Sec. Z.S., &c.; 15 Lower Belgrave Street, London.

Alfred Forbes Sealy, M.A., C.M.Z.S., &c.; Madras.

Charles William Shepherd, M.A., F.Z.S.; Trotterscliffe, Kent.

Rev. Alfred Charles Smith, M.A., Rector of Yatesbury, Wilts.

Rowland M. Sperling, Lieutenant Royal Navy, Her Majesty's Ship 'Racoon.'

Henry Stevenson, F.L.S.; Unthank's Road, Norwich.

Rev. Edward Cavendish Taylor, M.A., F.Z.S.; Oxford and Cambridge Club, London.

George Cavendish Taylor, F.Z.S.; 42 Elvaston Place, London.

Rev. Henry Baker Tristram, M.A., F.L.S., C.M.Z.S., &c., Master of Greatham Hospital, Durham.

Henry Morris Upcher, F.Z.S.; Sheringham Hall, Norfolk.

Right Hon. Arthur Viscount Walden, F.L.S., F.Z.S.; 15 Cromwell Road, London.

Extra-Ordinary Members.

Edward Blyth, Hon. Memb. As. Soc.; 27 Saint Mark's Crescent London.

Alfred Russel Wallace, F.Z.S.; 9 Saint Mark's Crescent, London.

Honorary Members.

Professor Spencer F. Baird, Assistant Secretary to the Smithsonian Institution, *Washington.*

Doctor Eduard Baldamus, Pfarrer zu *Osternienburg* bei *Cöthen,* Sekretär der deutschen Ornithologen-Gesellschaft.

Doctor Jean Cabanis, Erster Custos am Königlichen Museum der Friedrich-Wilhelm's Universität zu *Berlin.*

John Cassin, Academy of Natural Sciences, *Philadelphia.*

Doctor Gustav Hartlaub, *Bremen.*

T. C. Jerdon, Surgeon-Major in Her Majesty's Army, *Madras.*

Edgar Leopold Layard, F.Z.S., South African Museum, *Capetown.*

Professor J. Reinhardt, Kongelige Naturhistoriske Museum i *Kjöbenhavn.*

Robert Swinhoe, F.Z.S., F.R.G.S., Her Majesty's Consul at *Amoy.*

Jules P. Verreaux, Aide-Naturaliste du Muséum d'Histoire Naturelle à *Paris.*

CONTENTS OF VOL. III.—NEW SERIES.

(1867.)

NUMBER IX., *January*.

Page

I. The Ornithology of India.—A Commentary on *Dr. Jerdon's* 'Birds of India.' By EDWARD BLYTH, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc. 1

II. Egypt Revisited. By E. CAVENDISH TAYLOR, M.A., F.Z.S. 48

III. On the Ornithology of Palestine. (Part V.) By the Rev. H. B. TRISTRAM, M.A., F.L.S., C.M.Z.S. (Plate I.) . . 73

IV. A Month in Tripoli. By W. T. H. CHAMBERS . . . 97

V. Remarks on *Dr. Léotaud's* 'Birds of Trinidad.' By P. L. SCLATER, M.A., F.R.S. &c. 104

VI. On the Genus *Cinclus*. By OSBERT SALVIN, M.A., F.L.S., F.Z.S., &c. (Plate II.) 109

VII. Notices of Recent Ornithological Publications:—

1. *English*:—Sclater and Salvin's 'Exotic Ornithology,' part i.; Harting's 'Birds of Middlesex;' Crichton's 'Naturalist's Ramble to the Orcades;' King's 'Sportsman and Naturalist in Canada;' Lord's 'Naturalist in Vancouver Island and British Columbia'. 123
2. *French*:—Mulsant's 'Essai d'une Classification Méthodique des Trochilidées;' Pollen's 'Mémoires Scientifiques' 126
3. *American*:—Bryant on Birds of Porto Rico; Weiz on Vertebrates of Labrador; Lawrence on New Birds from Central and South America; Coues on the Ornithology of Arizona and 'Review of the Family *Procellariidæ*' 129

Page
4. *Australasian* :—Buller's 'Essay on the Ornithology of New Zealand;' Ramsay on Australian Oology 131

VIII. Letters, Announcements, &c. :—

Letters from Mr. E. P. Ramsay, Dr. D. Scott, Capt. Beavan, Messrs. H. J. Elwes, D. Mackay and C. Barron; Further Discovery of Didine Bones in Rodriguez; Demand for Vol. I. of 'The Ibis' 134

NUMBER X., *April.*

IX. The Ornithology of India.—A Commentary on *Dr. Jerdon's* 'Birds of India.' By EDWARD BLYTH, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc. 147

X. Notes on the Birds seen during a Voyage from London to New Zealand in 1866. By Captain F. W. HUTTON, F.G.S. . . 185

XI. Notes on Birds collected near Hakodadi in Northern Japan. By HENRY WHITELY, Junior. (Plate III.) 193

XII. On the Rufous-tailed Shrikes. By Viscount WALDEN, F.Z.S. (Plates V. & VI.) 211

XIII. Jottings on Birds from my Amoy Journal. By ROBERT SWINHOE, Her Majesty's Consul, F.Z.S., &c. 226

XIV. Notices of Recent Ornithological Publications:—

1. *English*:—Gould's 'Birds of Great Britain,' parts ix. and x.; Stevenson's 'Birds of Norfolk,' vol. i.; Colquhoun's 'Sporting Days;' Shepherd's 'North-west Peninsula of Iceland;' Grant's 'Birds found in Malta and Gozo' 237
2. *French*:—Gerbe's edition of Degland's 'Ornithologie Européenne;' Alphonse Milne-Edwards's 'Oiseaux Fossiles de la France;' Geoffroy on *Lophophorus lhuysi* 240
3. *Dutch and Belgian*:—Ornithological papers in the 'Nederlandsch Tijdschrift voor de Dierkunde;' De la Fontaine's 'Faune du Pays de Luxembourg;' 'Archives Cosmologiques' . 243

Page
4. *German*:—Hartlaub's 'Einleitung zur Ornithologie der Viti-, Samoa- und Tonga-Gruppe;' Von Müller's 'Reisen in Mexico;' Dieck 'De Sterno Avium' 245

5. *American*:—Lawrence on New Birds; Coues on the Ornithology of Arizona (second notice) 247

XV. Letters, Announcements, &c.:—

Letters from Dr. Cullen, Capt. Orde, Messrs. E. L. Layard, John Hancock, J. H. Gurney, and P. L. Sclater; Prof. Huxley's Lectures on the Classification of Birds; The Question of Priority in the Publication of Names; Announcement of Mr. Robert Gray's 'Birds of the West of Scotland;' Deaths of Drs. Léotaud and Bryant, and of Mr. Selby 247

NUMBER XI., *July*.

XVI. The Distribution and Migrations of North American Birds. By SPENCER F. BAIRD, Assist. Sec. Smithsonian Institution, For. Mem. Z.S. 257

XVII. The Ornithology of Ceylon.—A Supplement to *Dr. Jerdon's* 'Birds of India.' By EDWARD BLYTH, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc. 294

XVIII. The Avifauna of the Andaman Islands. By R. C. BEAVAN, Capt. Bengal Staff Corps, C.M.Z.S. 314

XIX. On the Land-Birds of the Seychelles Archipelago. By EDWARD NEWTON, M.A., C.M.Z.S. (Plate IV.) 335

XX. On the Ornithology of Palestine. (Part VI.) By the Rev. H. B. TRISTRAM, M.A., F.L.S., C.M.Z.S. (Plate VII.) . 360

XXI. Notices of Recent Ornithological Publications:—

1. *English*:—Gould's 'Birds of Asia,' part xviii.; Sclater and Salvin's 'Exotic Ornithology,' parts ii. & iii.; Lloyd's 'Game Birds and Wild Fowl of Sweden and Norway;' Robert Gray's

Page
'Birds of Loch Lomond;' Turnbull's 'Birds of East-Lothian;' A. C. Smith on the Life-History of the Cuckoo 371

2. *Dutch*:—Schlegel's 'Muséum des Pays-Bas,' part 8; Crommelin's Papers in the 'Archives Néerlandaises' 375

3. *American*:—Elliot's 'Birds of North America,' parts ii. to iv.; Cassin's 'Second Study of the *Icteridæ*;' Gundlach's 'Catalogo de las Aves Cubanas' 376

XXII. Letters, Announcements, &c.:—

Letters from Capt. F. W. Hutton, Messrs. J. E. Harting and J. H. Gurney, Lord Walden, Messrs. A. Hamond and O. Salvin; Extract from a letter of Dr. Hartlaub; The ornithological collections of the late Mr. H. E. Strickland and Mr. Arthur Strickland; Note on "*Tarsiger cucullatus*, Gould"; Death of Prof. De Filippi 378

NUMBER XII., *October*.

XXIII. Jottings on Birds from my Amoy Journal. By ROBERT SWINHOE, Her Majesty's Consul, F.Z.S., &c. 385

XXIV. Illustrations of Australian Oology. By EDWARD P. RAMSAY, C.M.Z.S. (Plates VIII. and IX.) 413

XXV. Notes on the Birds of Tangier and Eastern Morocco. By C. F. TYRWHITT DRAKE 421

XXV. Notes on Various Indian Birds. By R. C. BEAVAN, Capt. Bengal Staff Corps, C.M.Z.S. (Plate X.) 430

XXVI. Letters, Announcements, &c.:—

Letters from Messrs. E. P. Ramsay, E. L. Layard, W. T. Blanford, J. H. Gurney and H. B. Tristram, Lord Walden and Messrs. J. E. Harting and A. C. Smith; Extract from a letter of Mr. Allan Hume, C.B.; Deaths of Prince Maximilian of Wied and Mr. John Macgillivray 456

Index 473

PLATES IN VOL. III.

NEW SERIES.

Page
I. Bessornis albigularis 89
II. Cinclus ardesiacus 121
III. Garrulus brandti 200
IV. Tchitrea corvina 349
V. Fig. 1. Lanius isabellinus 225
Fig. 2. —— phœnicurus 216
VI. Lanius magnirostris 221
VII. Passer moabiticus 371
VIII. IX. } Illustrations of Australian Oology ..... { 413 417
X. Piprisoma agile 431

ERRATA ET CORRIGENDA.

Page Line
4, *Transpose to page* 5 *Nos.* 426 and 427.
11, 2, for *macrourus* read *macrurus.*
12, 3 of note, *for* that gentleman *read* Captain Beavan.
14, 12, *for* pt. xxii. *read* pt. xvii.
16, 1, *for* 506 *read* 507.
30, 8 *of notes,* for *Kalericzencki* read *kaleniczenckii.*
35, 30, for *corvus* read *corone.*
117, 33, }
118, 3 of note, } *for* Tchithatcheff *read* Tchihatcheff.
129, 24, *for* 109 *read* 169.
287, 19, for *tyrannus* read *varius.*
307, 34, for *E.* read *G.*
331, 11, *and elsewhere in the same paragraph,* for *C.* read *E.*
346, 16, *for* gun-cartridge *read* green cartridge.
349, 16, insert *Tchitrea* before *corvina.*
359, column 2, *insert* Gygis candida *before* Sterna velox.
373, 2, *for* London *read* Sweden.
375, 28, *insert* 182 *in the vacant space.*
376, 24, for *tretracula* read *tetracula.*
378, 18, for *T.* read *I.*
383, *The paragraph beginning* The two species of *Luscinia* &c. *should be in inverted commas.*

THE IBIS.

NEW SERIES.

No. IX. JANUARY 1867.

I.—*The Ornithology of India.—A Commentary on* Dr. Jerdon's '*Birds of India.*' By Edward Blyth, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc.

[Continued from 'The Ibis' for 1866, page 376.]

377. Chleuasicus ruficeps, Blyth; "*Paradoxornis sphenura,* Hodgson," G. R. Gray, Cat. B. Nepal, 2nd edit. p. 60.

382. Grammatoptila striata.

This bird builds a compact Jay-like nest; the eggs are spotless blue, as shown by one of Mr. Hodgson's drawings in the British Museum.

384. Gampsorhynchus rufulus.

The range of this species extends to the Tenasserim provinces (J. A. S. B. xxviii. p. 416).

385. Pyctorhis sinensis (Gmel.); *Timalia hypoleuca,* Frankl.; Mag. de Zool. 1835, pl. 39 (*figura mala*).

386. Pyctorhis longirostris (*cf.* Appendix, p. 872).

Most probably this bird is the *Megalurus* (?) *verreauxi* of Colonel Tytler (Ann. Mag. N. H. 1854, xiv. p. 176).

387. Trichostoma abbotti.

This differs very little—in the shade of colouring only—from *Brachypteryx sepiaria,* Horsfield, which is identical with *Malaco-*

pterum olivaceum, Strickland, and probably with the *Myiothera grisea* of Müller, in the Derby Museum at Liverpool, from Malacca and Java, and for which I formerly mistook a species of *Alcippe* received from Java, mentioned by Dr. Jerdon (vol. ii. p. 19) as *Brachypteryx sepiaria* of Horsfield. This Javan *Alcippe* resembles *A. nipalensis,* but has a general rufous tinge, with the sincipital lines ferruginous.

388. ALCIPPE NIPALENSIS.

Mr. Hodgson figures a deeply formed nest, with reddish-white eggs, speckled with deep ferruginous, the spots clustered at the large end, as belonging to this species. Mr. Layard describes that of the Cinghalese *A. nigrifrons* (which is akin to *A. atriceps*) as "built in a low thorny bush, and composed of grasses woven together in a dome, with the entrance near the top; eggs white, slightly freckled with pink spots" (Ann. Mag. N. H. 1853, xi. 397) *.

391. STACHYRHIS NIGRICEPS.

Inhabits the mountains of Tenasserim as well as the localities mentioned by Dr. Jerdon.

392. STACHYRHIS PYRRHOPS, Hodgs.; Gould, B. As. pt. xv. pl.

According to Mr. Gould, this species, and not *S. chrysea,* is the bird which Dr. A. Leith Adams obtained in Kashmir (P. Z. S. 1859, p. 184). The egg, as figured by Mr. Hodgson, is whitish, a little speckled. That of *S. chrysea* is pinkish-white, and the nest domed and placed on the summit of a sedge. *S. præcognitus* lays a blue egg (Ibis, 1866, p. 309).

393. STACHYRHIS RUFICEPS.

The *Timalia pileata* of M'Clelland from Asám (P. Z. S. 1839, p. 160) is this bird, though the true *T. pileata* is likewise an inhabitant of the Brahmaputra valley.

---

* To the species of *Turdinus* noticed in 'The Ibis' for 1865 (p. 47) add *Myiothera epilepidota,* Temm. (Pl. Col. 448. fig. 2), from Sumatra and Java. *Napothera,* Temm., yields to *Myiolestes,* Müller (Comptes Rendus, 1854, xxxviii. p. 54). *Trichostoma umbratile* (Temm.) and *T. celebense,* Strickland (Contrib. Orn. 1849, pp. 126, 127, pl. xxxv.), approach *T. abbotti* and *T. sepiarium.* The former only differs from *T. abbotti* in having "more rufous wings and flanks, and less greyish-white on the lores" (Sclater, P. Z. S. 1863, p. 215).

395. MIXORNIS RUBRICAPILLUS.

Identical with *Timalia gularis*, Horsfield, founded on a faded specimen, as suggested by Dr. Jerdon. It is common on the eastern side of the Bay of Bengal, in Arakan, the Tenasserim Provinces, and Malayan Peninsula, and is remarkable for the disproportionate loudness of its chirping. A second and finer species of *Mixornis* exists in *Timalia similis*, Temm., from Sumatra. Others are given by Bonaparte (Consp. Av. i. p. 217). Specimens of *M. gularis* received from Malacca are generally much faded in colouring from over-exposure to the sun in drying.

397 and 398. DUMETIA HYPERYTHRA, Franklin, and D. ALBOGULARIS (Blyth); Gould, B. As. pt. xii. pl.

The last-mentioned bird is the Flaxen Warbler, *Sylvia subflava*, var. A. of Latham (Gen. Hist. B. vii. p. 95), as shown by a specimen, so marked, in the Derby Museum at Liverpool. It is common in Ceylon. *D. hyperythra* is figured and very ill coloured (even as shown by the accompanying description) in the 'Magasin de Zoologie' for 1835 (pl. 40).

402 and 403. POMATORHINUS SCHISTICEPS and P. LEUCOGASTER.

These resemble each other in colouring; but the former is not only larger but has a proportionately larger and coarser bill and feet, with very much stronger and longer claws. *P. leucogaster* is common in the Dacca district of Eastern Bengal.

To the genus *Pomatorhinus* must be added, not only P. PHAYRII, as noticed by Dr. Jerdon (Appendix, p. 872), but also P. HYPOLEUCUS, nobis (J. A. S. B. xiii. p. 379, xiv. p. 559, xxiv. p. 273), which is figured as *P. albicollis*, Hodgson, by Gray and Mitchell (Gen. B. pl. 57), the range of both species extending from Nipâl to the Khásya hills and those of Arakan. *P. phayrii* differs from *P. ferruginosus* not "only in the crown being of the same colour as the back" (ii. p. 29), but also in having the bill of the usual colour, yellow with dusky ridge, instead of bright coral-red in the fresh specimen. The ferruginous colour of the breast is also less deep. A closely allied race to *P. phayrii* inhabits the Tenasserim provinces, *P. albogularis* (J. A. S. B. xxiv. p. 274). A Tenasserim specimen of *P. hypoleucus* is remarkable for having narrow white mesial streaks to the feathers of the nape (of which I could perceive no trace in Arakan specimens), and similar well-defined but wider streaks on the dark ash-coloured sides of the breast, which were little more than indicated in the Arakan specimens examined. Perhaps it is a distinct race, but more probably merely a particularly fine adult specimen of *P. hypoleucus,* as in the figure cited (taken from a Nipâlese example) the stripes on the sides of the breast are fairly developed. Col. Tickell, who procured the Tenasserim specimen, demurs to its being classed as a *Pomatorhinus.* He says, " Examine narrowly the bill, which will be found softer in texture (this, however, in a dry skin cannot be well perceived) and subcylindrical, whereas *Pomatorhinus* has the bill exceedingly compressed and hard. Then the shape of the head with its flat sinciput, and the fan-like broad tail." Should it be deemed advisable to detach *P. hypoleucus* from *Pomatorhinus,* a second and less typical species exists in *P. erythrogenys* of the Himalaya.

406. XIPHORHAMPHUS SUPERCILIARIS, Blyth; Gould, B. As. pt. ix. pl.

According to Mr. Hodgson the egg is white.

426 and 427. TROCHALOPTERUM LINEATUM and T. IMBRICATUM.

The former (and not the latter) is the *Cinclosoma setifer* of Mr. Hodgson as sent by him to the Calcutta Museum. I have seen numerous specimens from Sikhim and Nipâl, but *T. imbricatum* only from Butan, though I have long especially looked for it in Darjeeling collections. Dr. Adams (P. Z. S. 1859, p. 182) refers it to *Malacocercus*! The form is proximate to *Leucodiophron* of China and Formosa*.

408. GARRULAX CÆRULATUS.

The egg is bright blue, according to Mr. Hodgson. Mr. Swinhoe has a closely allied species, *G. pæcilorhyncha,* from

---

* The Malayan genus *Lophocitta,* referred to by Dr. Jerdon, I now consider to bear a near affinity to *Parus,* as does also the African form *Eurycephalus,* and certainly *Falcunculus* and *Oreœca* of Australia.

Formosa; and his *G. ruficeps,* from the same island, is nearly allied to *G. albogularis* (Gould, B. As. pt. xvi.).

410. GARRULAX RUFICOLLIS.

Mr. Hodgson figures the egg of a fine green colour.

414. GARRULAX OCELLATUS.

Surely a *Trochalopterum* rather than a *Garrulax.*

415. TROCHALOPTERUM ERYTHROCEPHALUM.

Mr. Hodgson figures a green egg, spotted much like that of *Turdus musicus,* as that of the present species.

417. TROCHALOPTERUM SUBUNICOLOR.

The eggs are green according to Mr. Hodgson.

422. TROCHALOPTERUM PHŒNICEUM.

Mr. Hodgson figures a beautiful compact nest, bound round with long lanceolate leaves.

423 and 424. TROCHALOPTERUM CACHINNANS and T. JERDONI.

In the development of the loral plumes these two species from Southern India resemble the Sumatran *Garrulax mitratus.*

427. ACTINODURA EGERTONI.

Mr. Hodgson figures the nest of this bird like that of an English Redbreast, with pinkish-white eggs. *Crocias guttatus,* Temm. (Pl. Col. 592), of Sumatra and Java, is a species not distantly allied to this.

428. ACTINODURA NIPALENSIS.

One of Mr. Hodgson's drawings represents a white egg with ferruginous spots, disposed much as in that of *Merula vulgaris.* This bird is the type of his genus *Hemipterum.*

429. SIBIA CAPISTRATA.

Mr. Hodgson figures a cup-shaped nest fixed in a branched twig.

432. MALACOCERCUS TERRICOLOR.

This species is undoubtedly the *Turdus canorus* of Linnæus, and the *Merula bengalensis* of Brisson, founded on Edwards's badly coloured figure (Nat. Hist. B. pl. 184).

435. MALACOCERCUS SOMERVILLII.

To this must be referred Mr. Swinhoe's *M. griseus* from Bombay (Ibis, 1865, p. 416). I do not find that Dr. Jerdon mentions that any of the true *Malacocerci* are "fair songsters," but rather that he distinctly intimates the reverse. The true *Malacocerci* are confined to India with Ceylon; but the allied genus *Chatorhea* extends to Northern Burma* and also to North Africa; for I consider the *Crateropus fulvus* (Desf.) (*Malurus numidicus*, Lev. jun., Expl. Sc. de l'Algerie, Ois., pl. ix. *bis*), noticed by Mr. Tristram (Ibis, 1859, p. 420), as also the *C. chalybius*, Bonap. (Ibis, 1859, p. 30, 1865, p. 79), with *C. rubiginosus*, Rüppell (Vögel Nord-Ost-Afrika's, taf. 19), to be three typical species of *Chatorhea*; while the *Malurus squamiceps* and the *M. acaciæ* of Rüppell seem referable to the peculiar type exemplified by *Malacocercus malcolmi* of India. This type I formerly denominated *Malcolmia*; but the name is preoccupied in botany. Dr. Rüppell has referred the two species last named to *Sphenura* (Vögel Nord-Ost-Afrika's)!

438. CHATORHEA CAUDATA.

The specimen described as *C. huttoni* (J. A. S. B. xvi. p. 476), from Kandahar, is larger than any that I have seen from India, having the wing 3·5 inches long and the middle tail-feathers exceeding 5 inches. According to Dr. Pucheran, the Bengal bird is equally found in the Philippine Islands (Arch. du Mus. vii. p. 342).

439. CHATORHEA EARLII (Blyth); *Malacocercus geochrous*, Hodgson.

440. MEGALURUS PALUSTRIS.

Occurs in the Philippines. I observed both this species and *Pyctorhis sinensis* to abound in bush-jungle near Akyab harbour. Mr. Wallace has a very fine species, *M. timoriensis*, from Western Timor.

442. SCHŒNICOLA PLATYURA.

I imposed this generic name in 1844 (J. A. S. B. xiii. p. 374). Prince Bonaparte afterwards (Consp. Av. 1850, p. 463) applied it to that section of Buntings of which the British *Emberiza*

---

* For remarks on the climate and productions of the Upper Irawádi, *vide* J. A. S. B. 1862, xxxi. p. 193.

schœniclus is the type, and for which Mr. Gould has adopted it in the 'Birds of Great Britain' (pt. vii.).

443. EURYCERCUS BURNESI.

This will have to stand as *Laticilla burnesi.* The name *Eurycercus* was first given; but I altered it to *Laticilla,* because the former had been already bestowed on a genus of *Entomostraca* (J. A. S. B. xiv. p. 596).

445 and 446. HYPSIPETES GANEESA and H. NILGIRIENSIS.

These are specifically identical (Ibis, 1865, p. 42).

447. HYPSIPETES MACLELLANDI.

The nest and eggs of this species as figured by Mr. Hodgson are those of a true Bulbul. *H. holti,* Swinhoe, of China, is closely allied.

448. HEMIXUS FLAVALA, Hodgson; *Pycnonotus flavula,* Gray and Mitchell, Ill. Gen. Birds, pl. 59.

Mr. Gray spells the specific name *flavula.* It is *flav-ala* of Mr. Hodgson. The range of this species extends to the Tenasserim provinces (J. A. S. B. xxiv. p. 277). *Microscelis,* Swains., is nearly allied, founded on the *Orpheus* (!) *amaurotis* of the 'Fauna Japonica' (Aves, pl. xxxi. B). But a second species of *Hemixus* exists in the *Iole cinerea,* A. Hay (J. A. S. B. xiv. p. 573). *Ixus virescens,* Temm. (Pl. Col. 332), seems referable to my *Iole*; in which case *Iole virescens,* nobis (J. A. S. B. xiv. p. 573), needs renaming, and I therefore here alter the name to *Iole viridescens.*

451. CRINIGER FLAVEOLUS.

Found also in the Tenasserim mountains (J. A. S. B. xxiv. p. 277).

Pycnonotus ruficaudatus, Eyton, is not *Trichophorus gularis,* Horsfield, but is identical with *Criniger cantori,* Moore.

452. IXUS LUTEOLUS.

Common in the Midnapore jungles, but does not extend on to the plains of Lower Bengal, or but sparingly to its extreme limits. It is common in Ceylon.

454. KELAARTIA PENICILLATA.

First noticed by Dr. Jerdon as the "Yellow-eared Bulbul" (Madr. Journ. Lit. Sc. no. xxx. p. 168), and together with it a "White-eared Bulbul," which has not since been identified. Both are from the Mysore country, below the Nilgiris; but the skins were accidentally destroyed before he took descriptions of them. The notice of the latter species is as follows:—"Above light green, below greenish-yellow; head, neck, and breast dusky-grey; ear-spot white."

Rubigula aberrans, nobis (ii. p. 88), is referred by Lord Walden (Ibis, 1866, pp. 321, 423) to *Muscicapa melanictera*, Gmelin, but is still retained in *Rubigula*. A common species in Ceylon (Ibis, 1860, p. 358, note).

457. Brachypodius poiocephalus; *Ixus fisqueti*, Eydoux and Souleyet, Voy. de la Bonite, Atlas, Ois., pl. 15.

460. Otocompsa jocosa.

As many as four races have been confounded under this name:—1, that of China, which is the true *Lanius jocosus*, L.;—2, that of Bengal and Nipâl, which is *Lanius emeria*, Shaw, *Ixus pyrrhotis*, Hodgson;—3, that of Southern India, which is *O. fuscicaudata*, Gould (P. Z. S. 1865, p. 664);—4, that of the eastern side of the Bay of Bengal, its range extending from the hills south of the Bráhmáputra valley as far southward as Pinang, which is *I. monticolus*, Maclelland. The last differs from *L. emeria* in having a shorter crimson ear-tuft, of a much deeper colour, and the feathers composing it are more rigid and wiry. O. fuscicaudata, of Southern India, has no white spots on the tail-feathers; and there does not appear to be a representative of this particular type in Ceylon. Mr. Gould first called my attention to the distinction of the South Indian race. The Chinese race I only *presume* to be peculiar, for I have had no opportunity of comparing it with the others. According to Mr. Swinhoe, Chinese specimens are "identical with the Calcutta race." It ranges from Canton southward.

462. Pycnonotus hæmorrhous of India, *auctorum*.

This must now stand as *P. pusillus*, nobis, the true *Muscicapa hæmorrhousa*, Gm., referring to *Ixus chrysorrhoides* of Mr. Swinhoe's list (*P. atricapillus*, A. Hay), which is figured as *Ixus hæmorrhous* in the Ornithological Report accompanying the narrative of Commodore Perry's Expedition. The Tenasserim *Pycnonotus nigropileus* there noticed is more nearly akin to *P. pusillus* of Arakan and Southern India, and differs only from the Malayan *P. crocorrhous*, Strickland, by having the lower tail-coverts crimson instead of flame-coloured, while in the Javan *P. chrysorrhous*, Horsfield, they are orpiment-yellow. It is not unlikely that these four races will prove to grade into each other. From the Deyra Doon I have seen Bulbuls resembling *P. pusillus* in colouring, but as large as *P. pygæus*, these being referable to *P. intermedius*, A. Hay, noticed by Dr. Jerdon, and doubtless identical with *P. bengalensis* mentioned by Dr. Adams as being common in the ranges near the plains of the Punjâb (P. Z. S. 1849, p. 181).

Genus Phyllornis (vol. ii. p. 97).

There are two types of this genus,—one with a melliphagous bill and verditer-blue shoulder, common to India and the Malay countries; the other with the bill more resembling that of *Iora*, and peculiar to the Malay countries. To the latter type belong *P. javensis* (*P. sonnerati*, Jard. & Selby; Gould, B. As. pt. xiii.) and *P. cyanopogon*, T. (*ibid.*), which differ only, though considerably, in size, the rest appertaining to the melliphagous type. In the former of these subgroups, if not also in the other, I suspect that adults of both sexes are similar, or very nearly so, the plumage commonly supposed to be feminine being that of immaturity. In the allied genus *Iora*, however, the sexes are differently coloured. I recognized the affinity of *Iora* to *Phyllornis* immediately upon becoming acquainted with the latter in a state of nature (Ann. Mag. N. H. 1849, xx. p. 384, &c.). The two groups have the same geographical distribution. The two sections of *Phyllornis* indicated are, I think, sufficiently distinct to be separately recognized; and I would restrict the name *Phyllornis* to the *javensis* type, and adopt *Chloropsis*, Jard. & Selby, for the other. The range of the Malayan *P. javensis* extends to the higher mountains of the Tenasserim provinces (J. A. S. B. xxiv. p. 277), where it occurs together with *C. hardwickii* and *C. hodgsoni*. The last-named species was obtained by Mr. Blanford seventy miles above Ava (J. A. S. B. xxxii. p. 79). *C. cochinchinensis*, nobis (Jerdon, ii. p. 98), is the *P. icteroce-*

phalus, Temm., which is common throughout the Burmese countries and Malayan Peninsula; Strickland referred it to *P. moluccensis* (Ann. Mag. N. H. 1847, xix. p. 130). I suspect that it is the true *C. cochinchinensis*, rather than the allied Javan species.

463 and 464. PHYLLORNIS JERDONI and P. MALABARICUS; Gould, B. As. pt. xiii. pls.

The last is common in Ceylon.

465. PHYLLORNIS AURIFRONS of India, *auctorum*; *P. hodgsoni*, Gould, B. As. pt. xiii. pl.

P. aurifrons, Temm. (Pl. Col. 484. fig. 1), is stated to be from Pallambang in Sumatra.

466. PHYLLORNIS HARDWICKII (Jard. & Selb.); Gould, B. As. pt. xiii. pl.

P. javensis and *P. cyanopogon* are likewise figured by Mr. Gould.

468. IORA TYPHIA.

This bird is found without variation of colouring over the Indo-Chinese countries, the Malayan Peninsula, Sumatra, Java, and Borneo. In Lower Bengal the cap and back have rarely some admixture of the black of *I. zeylanica*; and Col. Tytler remarks that it "assumes a much blacker appearance" in Dacca than those obtained in the vicinity of Calcutta (Ann. Mag. N. H. 1854, xiv. p. 174). A species peculiar to the Malayan countries (found alike in the Peninsula, Sumatra, Java, and Borneo) is *I. scapularis*, Horsf. ♀; and the male is Mr. Wallace's *I. viridissima* of Borneo, and, I suspect, *I. viridis* also. The large *I. lafresnayi* (*I. innotata*, nobis) ranges at least from Arakan to Malacca.

470. ORIOLUS KUNDOO.

This only differs from *O. galbula* in its larger and differently shaped bill, and in having some black feathers posterior to the eye. It visits Kashmir, and is probably the supposed *O. galbula* of Irkutsk.

471. ORIOLUS INDICUS is identical with *O. chinensis*, L., but not with "la Couliavan de la Cochin-Chine" (Pl. Enl. 570), which is more like *O. acrorhynchus*, Vigors, of the Philippines,

figured by Gray and Mitchell (Gen. Birds, pl. 58), and also *O. macrourus,* nobis, of the Nicobar Islands. Another species akin to the two latter is *O. frontalis,* Wallace (P. Z. S. 1862, p. 333, *Aves,* pl. xl.), from the Sula Islands, midway between Celebes and the Moluccas. *O. hippocrepis* of Java differs from *O. chinensis* (*O. indicus,* Briss.) in its smaller size, having the wing 5 inches long only, and the yellow border to the secondaries much reduced.

473. ORIOLUS CEYLONENSIS, Bp.; *O. melanocephalus,* C. W. Hahn, Vögel, &c. pt. vi. tab. 5.

474. ORIOLUS TRAILLI is not the "only" species of the division *Psarophulus,* to which *O. sanguinolentus,* Temm. (Pl. Col. 499), of Java and likewise Mr. Swinhoe's *P. ardens* of Formosa (Ibis, 1862, pl. xiii.) appertain.

475. COPSYCHUS SAULARIS* (L.); Gould, B. As. pt. xv. pl.

"Identically the same in China" (Swinhoe). In Ceylon the females (so far as I have seen) have the back blackish, like those of the Malayan *C. mindanensis*; whereas in Bengal and other parts of India, and also in Burmah, the females have the back comparatively pale ashy. The female of the Chinese bird I have not seen; but Mr. Swinhoe remarks (Ibis, 1864, p. 422, note) that "the female of the Ceylon *Copsychus* differs as much from the male as ours," *i. e.* the Chinese bird. The males from China, India, and Ceylon are undistinguishable. As Dr. Jerdon recognizes the slight distinction between the Dhyals (*Copsychus*) and the Shámas (*Cittocincla*), and I believe that most ornithologists would do so if familiar with the living birds, he should have referred the *Turdus luzoniensis* of Kittlitz to the latter, and not to the former, in which, however, he has followed Dr. Sclater (P. Z. S. 1861, p. 186). All of the Shámas have more or less of bright ferruginous colouring, more delicately formed pinkish tarsi and toes, and generally a more lengthened tail. They are, moreover, forest birds in their habits, not affecting, like the Dhyals, the vicinity of human abodes, and they are far superior as songsters. The most intermediate species known to me is *Cittocincla albiventris*, nobis, common in the Andamáns; and the song of this bird is inferior to that of other Shámas—though still not Dhyal-like, being much deeper in tone. Had a solitary specimen been obtained on the mainland, it would probably have been considered a hybrid between *Copsychus saularis* and *Cittocincla macrura,*—*C. saularis* being also an inhabitant of the Andamáns, but not *C. macrura,* so far as known; and it is most unlikely to have escaped the eye and ear of Col. Tytler*.

---

* This word is not a misprint for *solaris,* as has been suggested, Linnæus having evidently latinized Ray's "Saulary," the name under which that naturalist figured the species. Levaillant's translation of the native word "Dhyal" or "Dial" into *cadran* is rather an amusing mistake.

477. MYIOMELA LEUCURA.

Congeneric with, and most closely allied to, *Notodela diana,* Lesson, as suggested by me in 1847 (J. A. S. B. xvi. p. 138), to which the generic name *Ajax* has been applied, holding precedence of *Myiomela*. *A. leucurus* was obtained by Col. Tickell in the Amherst district, Tenasserim; and *A. diana* is described from Pegu, and was procured by Mr. Wallace in Western Java. He refers it to *Brachypteryx albifrons,* Boie (Bp. Consp. Av. i. p. 257). The only distinctions between the two consist in *A. diana* being brighter-coloured and having the white lunate mark on the forehead. A third species of *Ajax* is Mr. Swinhoe's *M. montium* (Ibis, 1864, p. 362). Mr. Hodgson figures a mossy nest and clay-coloured egg, much pointed at the small end, as those of *A. leucurus.*

478. GRANDALA CŒLICOLOR, Hodgs.; Gould, B. As. pt. xiv. pl., is figured also perched upon a twig by Gray and Mitchell (Gen.

---

* In the Report of the Proceedings of the Asiatic Society, Calcutta, for May 1865, a communication from Mr. T. F. Peppé, of Gya, is published, wherein that gentleman remarks:—"An annual *mela,* or fair, is held at Budhpore during the Churruk Puja festival, to which, amongst other things, are brought, I understand, numbers of young birds for sale, chiefly the Sháma (*Cittocincla macrura*) and young Parrakeets (*Palæornis rosa*). I imagine that it is from these fairs, which appear to be usual in many places in the district at this particular festival, many of those birds are collected which eventually find their way for sale to Calcutta, and are said to come from the Rajmehal hills."

Birds, pl. 50). I doubt if it is ever seen to perch. As noticed on a former occasion, this remarkable bird bears considerable resemblance in structure to *Sialia arctica*; but its habits are gregarious, the flocks, as observed by the late Capt. Speke, keeping to the margin of the snow-line, and seeking their food where the snow melts—a mode of life assuredly most remarkable for a species the males of which exhibit such intense brilliancy of colouring.

479 and 480. THAMNOBIA FULICATA and T. CAMBAIENSIS.

To judge from skins only, these might well be supposed to be the same species in summer and winter dress; but such is not the case; each is found at all seasons within its own range of distribution,—that of *T. fulicata* extending to Ceylon, and that of the other not reaching to Lower Bengal.

481. PRATINCOLA CAPRATA (Linn.); ♀ "*Œnanthe pyrrhonota,* Vieillot" (Pucheran); from Timor.

I never knew this species to occur *wild* in Lower Bengal; but it is kept there as a cage-bird, and known as the *Pidha*.

482. PRATINCOLA BICOLOR (Sykes); *P. atrata,* nobis; ♀ *Saxicola erythropygia,* Sykes.

483 and 484. PRATINCOLA INDICA and P. LEUCURA, Gould, B. As. pts. xv., xviii. pls.

The range of *P. caprata* extends to Timor, Flores, and Lombok, and that of *P. indica* (Gould, B. Asia, pt. xv. pl.) and *P. ferrea* to China; the last occurs also in Arakan and the Tenasserim provinces. The voice of *P. indica* is notably different from that of the European *P. rubicola.*

485. PRATINCOLA INSIGNIS.

Hitherto this fine species has been known only from a single male. I detected a female in Mr. Gould's collection, which was sent to him by Dr. Jerdon, who must have somehow overlooked it. The female is a very dingy bird, plain brown, with some white at base of tail and a little at the sides of the breast. The fact of Dr. Jerdon's procuring a specimen shows that it is not exclusively Tibetan.

487. Rhodophila melanoleuca, Jerdon; Gould, B. As. pt. xviii. pl.

This genus seems to be identical with *Oreicola*, Bonap. (Comptes Rendus, 1854, p. 6, misprinted *Oreoica*, p. 10*), at least as exemplified by *O. melanoleuca* and *O. luctuosa*, Bonap., of Timor. In this case it is necessary to rename the Indian species, which I here designate Oreicola jerdoni. In his 'Appendix' (p. 872), Dr. Jerdon refers *Pratincola ferrea* (no. 486) to the same genus; but I would decidedly retain it as a somewhat aberrant *Pratincola* †.

488 and 489. Saxicola leucuroides, Guérin; *Dromolæa opistholeuca* (Strickl.), Gould, B. As. pt. xxii. pl., and S. picata, Gould, B. As. pt. xvii. pl.

I regard both of these as true *Saxicolæ*, however much the former may resemble *Dromolæa leucura* in coloration. Mr. Gould figures brown females to both of these birds; but that of *S. opistholeuca* more especially, has so much the appearance of *S. œnanthe* that it might well be occasionally mistaken for the British species. Hence I suspect that Indian specimens referred hitherto to *S. œnanthe* might be re-examined advantageously. *S. leucuroides*, Guérin, is figured in the Atlas to MM. Ferret and Galenier's 'Voyage en Abyssinie' (Zoologie, pl. xi.).

---

* *Oreoica* (potius *Oreæca*), Gould, is a well-known Australian form of Titmouse.

† Mr. Wallace, P. Z. S. 1863, p. 485, enumerates four species of *Saxicola*—three of which he assigns to Timor, and one to Lombok. Now the true *Saxicolæ* (or Wheatears) are, in India, peculiar to the North-west Provinces, and are wholly foreign to the Indo-Chinese and Malayan countries. I was therefore curious to examine Mr. Wallace's specimens, and found that his *Saxicola dumetoria*, from Lombok, is allied to *Xanthopygia*, nobis; while *S. pyrrhonota*, Müller (as identified by Mr. Wallace), of Timor, is akin in form to the last, and also to *Siphia*, Hodgson, though peculiar in its coloration. Neither of these range properly with the *Oreicolæ*. Of the latter, *O. melanoleuca*, Bonap., is clearly *Œnanthe melanoleuca*, Vieillot, from Timor, as noticed by Dr. Pucheran (Arch. du Muséum, vii. p. 347). It cannot, therefore, be identical with *Melicophila picata*, Gould, B. Austr. iv. pl. 49 (*Lichnotentha picata*, Cab. Mus. Hein. i. p. 116), as Dr. Pucheran suggests. *Œ. pyrrhonota*, Vieillot, from Timor is identified by the same naturalist with *Pratincola caprata* ♀, also from Timor and in Mr. Wallace's collection from that island. The fact that *O. jerdoni* (*Rhodophila melanoleuca*, Jerdon) so long continued unobserved in Bengal may indicate that other species yet remain to be discovered in the intervening countries between Bengal and Timor.

490. Saxicola capistrata, Gould, B. As. pt. xvii.

Distinct from *S. leucomela* (Pallas), which is also figured by Mr. Gould (*cf.* Ibis, 1866, p. 409).

492. Saxicola atrogularis, nobis; Gould, Birds of Asia, pt. xvii. pl.

Distinct from *S. deserti*, Rüppell, as is also a fine new species akin to it, *S. montana*, received from Tibet (*cf.* Ibis, *ut suprà*). Both of these also are represented to have brown females*.

Genus Cercomela, Bonap. (ii. p. 133).

Among the characters of this group, as distinguished from *Saxicola*, should be noticed the comparative shortness of the tarsi.

495. Ruticilla phœnicura.

As Dr. Jerdon remarks in his 'Appendix' (p. 876), this should probably be erased as distinct from *R. phœnicuroides*. The *Phœnicura ruticilla* of Mr. Ewer's list (P. Z. S. 1842, p. 92) was doubtless *P. rufiventris*.

500. Ruticilla aurorea.

Specimens of this bird occur, rarely, in collections from Malacca, where of course it must be a winter visitant; and it is the only Redstart which I have seen from the Malayan peninsula.

504. Ruticilla cæruleocephala.

The female of this bird is coloured very differently from the male. It is plain brown, with a whitish belly and a little white on the wings; upper tail-coverts dark ferruginous, and a little of this colour margining the base of the outer tail-feathers.

---

* "At the Salt-lake in Ladakh, on one occasion a bird evidently of this genus was observed, about the size of the Whinchat; upper parts a bluish-black; breast black; belly and lower parts white. This I consider a rare, if not an undescribed species. A specimen was not procured." (A. Leith Adams, P. Z. S. 1859, p. 180.)

506. Ruticilla fuliginosa.

Occurs in China and Formosa according to Mr. Swinhoe. Dr. A. Leith Adams mentions a *Ruticilla* that was often seen in Ladakh in like situations with *R. fuliginosa*. "It is smaller: colour a leaden-ashy, with several *white* feathers in the tail. Specimen not procured" (P. Z. S. 1859, p. 179). *Henicurus scouleri* being likewise mentioned, it could not have been that species, as might otherwise have been plausibly suggested.

507. Larvivora cyana, Hodgs.

As Mr. Swinhoe (Ibis, 1866, p. 315) refers the *Motacilla cyana* of Pallas to this genus, identifying it with his *Larvivora gracilis*, the name of the Indian species is forestalled, and it must rank as *L. superciliaris* (Jerdon), as Mr. Swinhoe suggests.

508. Ianthia rufilata (Hodgson).

I. cyanura (Pallas), from China and elsewhere, is distinguished by its white superciliary mark.

510. Tarsiger superciliaris.

I quite agree with Mr. Hodgson in referring this species to *Tarsiger* and not to *Ianthia*, to which Dr. Jerdon has restored it*.

512. Calliope kamtschatkensis.

Received from the Philippines (Ibis, 1865, p. 30).

---

* Mr. Gould has two specimens of a bird which can hardly be separated from *Tarsiger*, although the bill is somewhat broader. In other respects the structure is identical. He is not certain whether they are from Africa or India.

Tarsiger cucullatus, Gould, *sp. n.* Dull green above, passing to yellowish on the upper tail-coverts; below bright yellow, with an ash-coloured hood and wings except the smaller coverts; middle tail-feathers entirely dusky-black, the next yellow for two-thirds of the outer web, the next three yellow for the basal three-fourths on both webs, and the outermost feather yellow on the inner web for the basal three-fourths, and the rest of it dusky; a concealed white spot in front of the neck at the border of the grey hood, indicative of affinity to *Cyanecula*. Length 5·5 in., wing 3 in., tail 2·5 in., bill to gape ·62 in., tarsus 1 in. Both specimens evidently males.

514. CYANECULA SUECICA* occurs also at Tientsin (Swinhoe). Captain Hutton says (J. A. S. B. xvi. 780) that the race which is a summer visitor at Kandahar has "no red spot on the blue throat." Dr. Bree remarks (B. Eur. ii. p. 12) that I referred the Indian bird "to the white-spotted variety." Surely I never made such a mistake! In the paper from which he quotes a passage I distinctly assert, of the Indian race, that "its pectoral spot is always rufous instead of white" (J. A. S. B. xvi. p. 135). And again (Ann. Mag. N. H. 1843, xii. p. 100) I have stated that "all have the central mark of the breast rufous and not white." These statements should be sufficiently explicit. Mr. Gould assures me that Indian specimens run smaller than those of Europe. They appear to be identical with *C. dichrosterna*, Cab. (Mus. Hein. 1850, i. p. 1, note) and *C. orientalis*, Brehm (J. f. O. 1854, p. 33).

Dr. Jerdon remarks, with regard to the present species, that I would class the Nightingale with the Robins, while he thinks that it would "associate more naturally" with the *Calamoher-*

---

* Nearly all ornithologists have taken it for granted that the *Motacilla suecica* of Linnæus is the form having a white spot in the middle of the blue breast. This is not the case, the true *M. suecica* being expressly stated (Syst. Nat. 12th ed. i. p. 336) to be "pectore ferrugineo," a character possessed by all the Swedish examples we have ever seen. It follows therefore that the *Motacilla cærulecula* of Pallas (Z. R.-A. i. p. 480) is strictly synonymous with *M. suecica*. The form with the white spot was figured as *Sylvia cyanecula*, Meyer and Wolf (Tasch. deutsch. Vögelk. 1822, i. p. 240), and that with the entirely blue breast as *S. wolfi*, Brehm (Lehrb. Europ. Vögel, 1823, i. p. 344, pl.). But Meyer and Wolf certainly did not regard the white-spotted bird as distinct from *M. suecica*, L., and therefore their name "*cyanecula*" cannot be permitted to stand. The name next in point of date, and solely applicable to the white-spotted form, is *S. leucocyanea*, Brehm (Handb. Nat. Vög. Deutschl. 1831, p. 353); and this, accordingly, ought to be adopted for it, as it has been by that author in his latest article on the subject (J. f. O. 1854, pp. 33–36). In a paper by Dr. Altum on the Bluethroats (Naumannia, 1855, pp. 166–170, pl.) he expresses an opinion that there is only one species, and endeavours to show by figures that the various forms are only phases through which each individual successively passes. He does not, however, account for the fact that in Scandinavia the white-spotted is unknown, except perhaps as a straggler, while that which breeds in Holland and Germany as constantly never assumes the red spot.

pinæ. My opinion has always been that the Nightingales are very closely akin to the small Solitary Thrushes of America. Their speckled nestling-plumage is at variance with Dr. Jerdon's view, as is also their mode of nidification. Audubon's description of the song, habits, and nidification of *Turdus wilsoni,* on the contrary, accords remarkably with what we observe of the British Nightingale*.

For some years past (until the time that I left India) a German speculator annually brought a large supply of European singing-birds to Calcutta, including half-a-dozen or more Nightingales on each occasion. I possessed one, in fine song, at the time I quitted the country. Some years ago, also, but not latterly, Nightingales were brought all the way to Calcutta from Persia, *viâ* Afghánistân; but these were of a rather larger species, perhaps *Luscinia major* (*Sylvia philomela,* Temm.), and were scarcely quite equal to the other as songsters. To the natives they are alike known as the *Bulbul Bosta.* In Dr. Hooker's work on the Sikhim Himálaya, "the Nightingale" is referred to, more than once, as an inhabitant of the interior of Sikhim, and as singing at a time of the year (October) in which the real Nightingales are mute. Of course some other bird is intended, though of what species or genus I am unable to conjecture. The Sháma, which is sometimes called the Indian Nightingale, does not inhabit Sikhim. The importation of Nightingales and other European song-birds should be borne in mind in the event of skins of such birds happening to occur in collections brought from India. Dr. A. Leith Adams justly remarks that Moore, in his 'Lalla Rookh,' might have introduced the Swallow in place of the Nightingale. "'The Nightingale's hymn from the Isle of Chunars' is a creation of the poet's imagination. The *Luscinia philomela* is not found in the Western Himalayas" (P. Z. S. 1859, p. 175). Nor in the Eastern Himálayas most assuredly!

515. Acrocephalus brunnescens, Jerd.; *A. orientalis,* G. R. Gray, P. Z. S. 1860, p. 349 (from Batchian). Also occurs in Java.

---

* Two species of *Luscinia* from South Africa are mentioned by Dr. Hartlaub (Ibis, 1862, p. 145). Surely these are not veritable Nightingales?

516. ACROCEPHALUS DUMETORUM.

Neither in habits nor in voice does this species accord with *A. streperus* (*Sylvia arundinacea,* Lath.) of Europe, with which Mr. Gould identifies it. It does not affect the vicinity of water; and the same is remarked by the Abbé Caire (Rev. Zool. 1855, p. 65) of the European *A. palustris*—so misnamed. Its song is a soft and pleasing warble. The *S. montana,* Horsf., of Java, referred to by Dr. Jerdon, I now assign to *Neornis,* Hodgson (sinking *Horornis* altogether). Ceylon specimens of *A. dumetorum* appear always to have a distinct greenish shade, but do not otherwise differ from continental examples.

Dr. Jerdon remarks correctly of *A. brunnescens* that it differs from the European *A. arundinaceus* (*Sylvia turdoides,* Meyer) in the first long primary being $\frac{3}{16}$ inch shorter than the next, whereas in the European analogue the first long primary is, if anything, longer than the second,—and that *A. dumetorum* has "the same proportions of the quills" as *A. brunnescens,* the first quill being very minute and pointed, and the second equal to or longer than the sixth. This difference between the Indian and European species of *Acrocephalus* was first pointed out by myself (J. A. S. B. xv. p. 288). *A. brunnescens* is of course the *Calamoherpe turdoides,* from India, of Dr. Jaubert (Rev. Zool. 1855, p. 63).

518. ARUNDINAX AEDON (Pall.); *A. olivaceus,* Blyth (*olim*); *Motacilla aedon,* Pallas; Von Schrenck, Reise Amurl. i. tab. xii. fig. 1.

Common in Eastern Asia, and has been received from the Andamán Islands. Dr. Cabanis erroneously refers *Motacilla aedon,* Pallas, to *Luscinia major,* Brehm.

519. DUMETICOLA AFFINIS.

The bird figured as this, by the name *Calamodyta affinis,* by Gray and Mitchell (Ill. Gen. Birds, pl. xlix. fig. 2) would seem to be *Tribura luteoventris* (no. 522). I have received from Dr. Jerdon two species of this genus, one of which is the true *affinis* (*Salicaria affinis,* Hodgson), and the other may be distinguished as

DUMETICOLA BRUNNEIPECTUS, sp. nov.

Size and form of *D. affinis,* and the upper parts are of the same uniform dark olive-brown colour; lores, chin and throat, and middle of the belly pure white; sides of the throat, breast, flanks, and tibial plumes rufescent brown; lower tail-coverts brown, with broad, pale tips, though considerably less broad than are the white tips to the lower tail-coverts of *D. affinis*. *Hab.* Himálaya?

A third species exists in *Horornis flaviventris,* Hodgson (no. 524). Olive-brown above, with a slight ruddy tinge; below paler; whitish, with a tinge of yellow, on throat and breast; lower tail-coverts brown, with dull whitish tips. Wing 2·12 inches; tail 2·55 in., its outermost feather ·5 in. shorter than the middle ones.

A fourth very probably exists in *Horornis fortipes,* Hodgson (no. 526), to judge from my description of a specimen (J. A. S. B. xiv. p. 585): "Colour uniform dark olive-brown above; below pale ochraceous-brown, approaching to albescent; flanks and lower tail-coverts dark brown, the latter margined paler; bill dusky above, paler below; legs also pale. Length about 4¼ in.; wing 2 in.; and tail 1½ in., its outermost feather ½ in. shorter; bill to gape ⅝ in.; and tarsi ¾ in." Mr. Hodgson writes, however, "Bill slender, with notch and inclination distinct; *rictal hairs distinct.* Tail broad, soft, fan-shaped. Legs strong, and frequently smooth. Wing as in *Tribura,* more or less pointed, and not absolutely rounded as in *Horeites.*"

I think that these three (or four) species of *Dumeticola* might very well be merged in *Locustella*, *L. nævia* has not necessarily an aquatic propensity; for I have observed it in the driest furze-brakes in this country. I suspect that all of this group will be found to have the cartilaginous and stiffened tendons of the muscles of the leg, to which I called attention so long ago as 1834 (Ann. Mag. N. H. vii. p. 341).

520. Locustella nævia, Bodd.; *Sylvia locustella,* Lath. (*vide* J. A. S. B. xxiii. p. 216).

This is very decidedly not the *Motacilla certhiola,* Pallas, as figured by Mr. Gould and Dr. Bree. I still think that it is the British species; perhaps, however, it may be *L. hendersoni,* Cassin (Proc. Acad. Phil. 1858, p. 293) = *L. macropus,* Swinhoe (P. Z. S. 1863, pp. 93, 293). It is not *L. ochotensis,* Middend.

(Sib. Reise, tab. xvi. fig. 7), which I have seen at the British Museum. Mr. Wallace has two fine large species of *Locustella* —*L. fasciolata* (*Acrocephalus fasciatus*, G. R. Gray, P. Z. S. 1860, p. 349), from Batchian, and *L. insularis*, Wallace, from Mati Island, north of Jilolo.

522. TRIBURA LUTEOVENTRIS, Hodgson; *qu.* "*Calamodyta affinis*," Gray and Mitchell, Ill. Gen. Birds, pl. xlix. fig. 2?

Mr. Gould has an Indian specimen, which I think belongs to this species, which he refers to *Sphenœacus*, Strickland (as exemplified by his *S. galactodes*, B. Austr. iii. pl. 35). Mr. Swinhoe describes a *T. squameiceps*, from China, as "allied to *T. luteiventris*, Hodgson, from Nepal" (P. Z. S. 1863, p. 292). *Schœnicola platyura*, Jerdon (no. 412), should probably rank near it, as also *Salicaria* (?) *cinnamomea*, Rüppell (J. A. S. B. xxiv. p. 260).

523. HORORNIS FULVIVENTER, Hodgson (*nec nobis*, Ibis, 1865, p. 33), is identical with *Phylloscopus fuscatus*, nobis (Jerdon, no. 555)!

524. HORORNIS FLAVIVENTRIS.

A true *Dumeticola*, or *Locustella* (*vide suprà sub* no. 519).

525. HORORNIS FULIGINIVENTER.

A *Phylloscopus* akin to no. 523 (*vide infrà sub* no. 555). Mr. G. R. Gray has referred both of these species to *Regulus* (Cat. B. Nepal, p. 64)!

526. HORORNIS FORTIPES.

Probably a *Dumeticola*, or *Locustella* (*vide suprà* sub no. 519). Among the unmounted skins in the British Museum I found specimens sent by Mr. Hodgson as *H. fulviventer*, *H. flaviventris*, and *H. fuliginiventer*, and examples of the first and third at the India Museum, which I do not hesitate to assign as above; also, in both museums, numerous specimens labelled *H. assimilis*, Hodgson, being the species which I had previously considered to be *H. fulviventer* (as in Ibis, 1865, p. 33, where I noticed its close affinity with the Javan *Sylvia montana*, Horsf.). The same bird I formerly described as *Drymœca brevicaudata* (J. A. S. B. xvi. p. 459), and subsequently regarded it as the adult of *Neornis flavolivacea* (Cat. Mus. As. Soc. p. 144), wherein Dr. Jerdon follows me (*cf.* no. 552). I had only young examples of

N. flavolivacea in nestling plumage, and I rightly referred them to the same genus as the other; only the species proves to be different. The matter accordingly resolves itself into this—that *Horornis* becomes reduced to the Javan *H. montanus* (Horsf.) and *H. assimilis,* Hodgson (*Drymœca brevicaudata,* nobis), which I do not think can be separated generically from *Neornis flavolivacea,* Hodgson. It remains to decide which of the two generic names should be retained; and I think that *Horornis,* as the source of so much confusion, had better be abandoned. The following species would then fall under *Neornis*:—1. *Sylvia montana,* Horsf., from Java; 2. *N. assimilis,* Hodgson; and 3. *N. flavolivacea,* Hodgson. *N. assimilis* (*Drymœca brevicaudata,* nobis) is rufescent olive-brown above, much paler beneath, more or less whitish on the throat and belly, and tinged with fulvous on the flanks; fore part of the wing underneath pure yellowish-white. Wing 2 inches; tail 2·25 in., its outermost feathers half an inch shorter; tarsi ·75 in. A specimen from Afghánistân is of a paler general hue, not quite so much inclined to ruddy, and more to greenish; whilst *N. montana* of Java is darker, and wants the rufous tinge above, but has it on the breast and flanks. *N. flavolivacea* is dull greenish-olive above, and dull yellowish below. Mr. Hodgson figures the egg of *N. assimilis* as uniform dark red, and the nest as cup-shaped.

527 and 528. Horeites brunneifrons and H. pollicaris. Specimens in the British Museum labelled *H. brunneifrons* and *H. schistilata* are undistinguishable; others marked *H. pollicaris* appear to me to be the same in nestling plumage. *H. robustipes,* Swinhoe, is described from Formosa (Ibis, 1866, p. 398).

530. Orthotomus longicauda (Gmel.); *O. phyllorrhapheus,* Swinhoe, Ibis, 1860, p. 49, P. Z. S. 1863, p. 294.

O. patia, as figured by Mr. Hodgson, is a small *Prinia* with *twelve* rectrices. I have had the common Tailor-bird's nest brought to me within ten or a dozen oleander-leaves drawn together, and have also seen it within a single leaf of *Brugmannsia suaveolens,* and commonly within the broad leaves of the brinjal (*Solanum esculentum*). The oleander-leaf nest referred to should be in the Calcutta Museum. Of course the beauty of the nest in the living green leaf is lost in dry specimens.

532. PRINIA FLAVIVENTRIS.

Delessert does not give this bird from the Nilgiris. *P. sonitans*, Swinhoe, of China and Formosa, is nearly allied to it, and lays a similar remarkably coloured egg (bright brick-red, without spots), as *P. socialis* also does occasionally,—such an egg, with the nest, of this species being figured by Mr. Fraser, in his 'Zoologia Typica,' for those of *Drymoipus inornatus*. The European *Cettia sericea* lays a similar egg, and has likewise only ten rectrices; but the *C. africana*, Bonap., has twelve rectrices, and appears to me to be a large *Locustella*.

537. PRINIA CINEREOCAPILLA.

Mr. Hodgson figures *P. stewarti* with this name.

539. CISTICOLA SCHŒNICOLA, Bp.; *C. brunneicephala*, Temm. and Schl.; *C tintinnabulans*, Swinhoe (from Japan, China, and Formosa).

Indian specimens in nestling plumage have the cap more or less completely rufous-brown, which is not the case with some stuffed young *Cisticolæ* in the Zoological Society's house, except just at the forehead.

541. CISTICOLA TYTLERI, Blyth; 'Buff-headed Warbler,' Latham (Ibis, 1865, p. 44).

548. SUYA FULIGINOSA.

Probably identical with *S. atrogularis*. Mr. Hodgson, however, figures the egg of *S. fuliginosa* as rufous-white, with minute rufous specks, that form a zone at the large end; and that of *S. atrogularis* as green, with rufous specks, more numerous at the large end.

SUYA GANGETICA, Jerdon, *in. lit.*, sp. nov.

Plain brown above, rufescent on the head; lower parts much paler; throat whitish. Wing 2·25 inches, tail 3·75 inches.

Common along the Upper Ganges.

550. BURNESIA LEPIDA, Blyth; Gould, B. As. pt. vii. pl.

Identical with *Malurus gracilis*, Rüppell, of Palestine and North-eastern Africa, which specific name holds precedence.

Dr. A. Leith Adams suggests that it may be the *Sylvia textrix* of Savigny (Ibis, 1864, p. 17). According to Mr. Tristram, "it builds a very neat domed nest near the ground, with four or five richly coloured pink eggs. It is a very noisy and conspicuous bird" (P. Z. S. 1864, p. 437). I certainly have no recollection of the Indian bird being noisy; but then I have not observed it in the breeding-season. Skins from India and Egypt are undistinguishable.

551. Franklinia buchanani.

Dr. Jerdon has sent a slightly distinguishable race from the district north-west of Delhi by the name *F. cleghorniæ*. It merely differs in having the upper parts pale rufescent brown, deepening and becoming more rufescent on the crown. I made over to Mr. Gould the only specimen sent.

552. Neornis flavolivacea (*vide suprà sub* no. 526).

553. Phyllopneuste rama; *Sylvia rama*, Sykes (1832); *S. scita*, Eversmann; *S. caligata*, Licht.; *Salicaria elaica* (?), Lindermeyer; *Ficedula ambigua* (?), Schlegel.

I have compared Indian with Siberian specimens marked *S. scita* in Mr. Gould's collection, and consider them identical, —the latter being in summer aspect of plumage, with abraded feathers that show greyer and much less olivaceous (as, indeed, I have seen in some Indian examples), agreeing with Dr. Bree's figure of *Sylvia elaica**. The range of the latter extends to Egypt and Algeria. I have never obtained *P. rama* in the immediate neighbourhood of Calcutta, upon the mud soil; but higher up the river Hugli, where sand prevails, it is tolerably common in the cold season, frequenting the bush-jungle. Can Dr. Jerdon be correct regarding the nest? He remarks, "I have found the nest, on one occasion only, at Jaulna, in the Deccan; it was cup-shaped, and contained four pure white eggs." (For further particulars of *P. rama*, consult J. A. S. B. xvi. p. 440.) *Sylvia eversmanni*, Bonap. (Middend. Sib. Reise, tab. xvi. fig. 1), belongs evidently to the same genus, as also

---

* I have not been able to compare a specimen of *P. rama* with the figure of *P. elaica* by Des Murs (Icon. Orn. pl. 58. f. 1). But I much suspect the identity, so far as I can judge from that figure.

Phyllopneuste schwarzi, Radde (Reisen, &c., taf. ix. figs. 1 *a*, *b*, and *c*).

554. PHYLLOSCOPUS TRISTIS, Blyth; Gould, B. As. pt. xvii. pl.

In his 'Memoirs of Hugh Edwin Strickland' (p. clxiii) Sir W. Jardine identified (or rather strongly opined the identity of) this species with *P. brevirostris*, Strickland. Mr. Gould considers them distinct, though without mentioning wherein the difference consists.

555. PHYLLOSCOPUS FUSCATUS, nobis (1842); *Horornis fulviventer*, Hodgson (1845); *Sylvia sibirica*, Middendorff (Sib. Reise, tab. xvi. figs. 4–6, 1858).

Common in China, Formosa, and Japan.

Horornis fuliginiventer, Hodgson, is nearly allied to *P. fuscatus*, but much darker in colouring. Plain dusky brown above, paler and somewhat fulvescent below, with dull yellowish-white chin and superciliary streak. Outermost tail-feather $\frac{1}{16}$ inch shorter than the rest. Wing 2 inches, tail 1·75 inch.

"557. PHYLLOSCOPUS TROCHILUS."

In his 'Appendix' (iii. p. 876), Dr. Jerdon doubts the propriety of retaining this European species in his list. Mr. Gould remarks (in his 'Birds of Great Britain,' pt. i.) that "in several works lately published, I am made to state that this bird is found in India; now I do not deny having made such an assertion; but if I have, I must have been deceived, for I have no positive evidence of its having been found there." The assertion occurs in the Zoological 'Proceedings' for 1835 (p. 90), "Inhabiting Europe generally, and the western portions of India." For the present it may, therefore, be safely erased.

559. PHYLLOSCOPUS NITIDUS.

Through some misconception Mr. F. Moore (Cat. Mus. H. E. I. Co. p. 343) placed this as a synonym of *Reguloides superciliosus* (*Regulus modestus*, Gould), as cited (*cf.* Ibis, 1862, pp. 55 and 386). No two species are more palpably dissimilar. Mr. Layard procured it in Ceylon.

563. REGULOIDES OCCIPITALIS.

This species, which is closely allied to *Sylvia coronata*, Temm.

and Schl. (Faun. Japon. Aves, pl. xviii.), does not rank well as a *Reguloides*. It has longer and firmer wings than the other Indian species of the group.

564. REGULOIDES TROCHILOIDES.

Not uncommon, rather than "very common," about Calcutta during the cold season; and the same remark applies to *Phylloscopus affinis* (no. 561).

565. REGULOIDES SUPERCILIOSUS (Gmelin); *Regulus modestus*, Gould; *Phyllobasileus superciliosus*, Cab. J. f. O. 1853, taf. 1.

566. REGULOIDES PROREGULUS (Pallas); *Abrornis chloronotus*, Hodgson.

Mr. Swinhoe remarks, "In the summer of 1857 I found the pine-groves abounding with numerous families of *Reguloides proregulus* and *Parus minor*" (Ibis, 1862, p. 257). I have repeatedly observed and shot *R. superciliosus* both in Bengal and Southern Burma, but never met with it otherwise than singly—with the habits of a *Phylloscopus*, and not those of a *Regulus* as Mr. Swinhoe's observation of the nearly allied *R. proregulus* would imply. Mr. Hodgson figures a pendent nest like that of a *Dicæum* as the nest of *R. proregulus* *.

570. CULICIPETA CANTATOR (Tickell), Jerdon, is distinctly an *Abrornis*. I obtained one specimen only of this bird near Calcutta, and Col. Tickell obtained one in Central India. This is the only *Abrornis* I know of which occurs in India southward of the Himálaya.

574. ABRORNIS FLAVIVENTRIS seems to be identical with *A. superciliaris*, Tickell (J. A. S. B. xxviii. pp. 414, 453). In this case the latter name holds precedence; and the Tenasserim provinces would have to be included in the range of this species.

578. ABRORNIS CASTANEICEPS (Hodgson), Jerdon, is decidedly a *Reguloides*, and is figured as *Regulus castaneiceps* by Gray and Mitchell (Ill. Gen. Birds, pl. 49. f. 1).

---

* The North American *Regulus calendula* has not the peculiar feather impending over each nostril of the normal Goldcrests.

ABRORNIS GRISEIFRONS, G. R. Gray (Cat. Birds of Nepal, 2nd ed. p. 33).

"Upper surface olivaceous-yellow; front obscure grey; eyebrows, from nostrils to the hind-head, and throat white; ear-coverts obscure grey and white; wing-coverts fuscous, margined with olivaceous-yellow; quills fuscous-black, margined externally with olivaceous-yellow, and internally with rufous-white; tail fuscous-grey, margined externally with olivaceous-yellow, and internally with rufous-white; beneath the body bright yellow; bill plumbeous, and feet pale. Length 4″ 1‴, wings 2″, tarse 9‴, bill from gape 5‴."

ABRORNIS MACULIPENNIS, nobis, sp. nov.

This is a species allied to *A. superciliaris* (*A. flaviventris*, no. 574), but with two distinct yellowish-white wing-bands and an oval whitish spot at the tip of the outer web of each tertiary. Crown dusky greyish-olive, with white supercilia and albescent medial streak. Upper parts olive-green; the throat and breast ashy; belly, flanks, and rump-band dull yellow; three outer tail-feathers on each side having their inner webs white. Wing 2·75 inches, tail 1·25 inch, tarsi 5·8 inch. From Nipâl or Sikhim. Specimen in the India Museum at Fyfe House.

I cannot recognize the "*Abrornis*" noticed by Dr. A. L. Adams (P. Z. S. 1859, p. 182), which he says is common in the woods and thickets of the lesser ranges of the Western Himalayas. "Approximates pretty closely to the *Abrornis xanthoschistus*, Hodgson, but differs in some respects. Size of *Motacilla trochilus*, Linn.; bill long, slender, and slightly notched, with a few weak bristles at the gape; head, neck, and back leaden-ashy, a white line over the eye; rump and sides tinged with yellow; * * * tail pretty long, olive; wings rounded, first quill very short, second not so long as third, fourth, fifth, and sixth, which are about equal; throat, neck, breast, and lower parts lively yellow; tarsus long, slender, and light brown; lateral toes unequal. Call-note loud; often seen with the *Parus melanolophus*, Vig."

A conspectus of the Indian *Phylloscopus* group may here be acceptable. The numbers are those of Dr. Jerdon's work.

Tickellia hodgsoni (579).
Culicipeta burkii (569).
Abrornis cantator (570).
—— schisticeps (571).
—— xanthoschistus (572).
(Adams's unnamed species, *ut suprà*).
—— albosuperciliaris (573).
—— superciliaris (flaviventris, 574).
—— poliogenys (575).
—— affinis (576).
—— albogularis (577).
—— griseifrons (*ut suprà*).
—— maculipennis (*ut suprà*).
Reguloides trochiloides (564).
Reguloides superciliosus (565).
—— proregulus (566).
—— viridipennis (567).
—— castaneiceps (577).
—— (?) occipitalis (563).
Phylloscopus tristis (554).
—— fuscatus (523 & 555).
—— fuliginiventer (525).
—— magnirostris (556).
—— lugubris (558).
—— nitidus (559).
—— viridanus (560).
—— affinis (561).
—— indicus (532).
Phyllopneuste rama (553).

In China, Mr. Swinhoe refers the following species of *Phylloscopus* (as recognized by Dr. Jerdon) to *Phyllopneuste*:—*P. tenellipes*, *P. sylvicultrix*, *P. xanthodryas*, *P. plumbeitarsa*, and *P. coronatus*, with *Reguloides superciliosus* and *R. proregulus*. From Amuria he gives *P. fuscatus* and *P. borealis*, Blasius. From Japan *P. coronatus*. From Formosa *P. fuscatus*, *P. coronatus*, and *P. sylvicultrix* (P. Z. S. 1863, pp. 295, 336). From Eastern Siberia M. Gustav Radde gives *P. fuscatus* (*sibiricus*), *P. schwarzi* (taf. ix. fig. 1 *a*, *b*, *c*), and *P. coronatus*, with *Phyllopneuste eversmanni* and *Reguloides superciliosus*. A beautiful *Abrornis* from Java is figured as *Phylloscopus trivirgatus* (Temm.) by Strickland (Contrib. Orn. 1849, pl. 34); and Dr. Jerdon regards the *Pycnosphrys grammiceps* (Verreaux), figured on the same plate, as allied to *Reguloides castaneiceps*, from which, however, it should differ by possessing the "beak of the *Muscicapidæ*."

582. Sylvia affinis is not nearly allied to the European *S. cinerea* (as is *S. conspicillata*), but differs only in its larger size from *S. curruca*. Mr. Gould, therefore, is wrong in suspecting its identity with *S. cinerea* (B. G. B., pt. vii.).

583. Sylvia curruca.

This does not occur near Calcutta, but is numerous during the cold season on the sandy soil at some distance up the river Hugli, where the baubul (*Vachelia farnesiana*) grows plentifully.

Sylvia delicatula, Hartlaub (Ibis, 1859, p. 340, pl. ix. fig. 1).

Not rare in the desert country north-west of Delhi. A specimen received from Dr. Jerdon I have made over to Mr. Gould. *Stoparola deserti,* Loche (R. Z. 1858, p. 394, pl. xi. fig. 1), *Sylvia deserticola,* Tristram (Ibis, 1859, p. 58), would seem to be nearly akin.

584. HENICURUS (errore *Enicurus*) MACULATUS, Vigors; Gould, B. As. pt. xviii. pl.

Two species have been confounded under this, respectively inhabiting the East and West Himálaya. The western bird is *H. maculatus,* Vigors; and the eastern species (inhabiting Nipâl, Sikhim, and Butan) is

HENICURUS GUTTATUS, Gould, P. Z. S. 1865, p. 664; B. As. pt. xviii. pl.

Like *H. maculatus*, but smaller, with shorter and *much* narrower tail-feathers, the white on the forehead considerably reduced in extent, and the white spots on the back fewer and small and round (instead of being broad and lunate); an admixture of brown colouring on the occiput. Wing 4 inches, longest tail-feather 4·5 inches.

586. HENICURUS SCHISTACEUS extends its range to China (Swinhoe). The relationship of this genus to the Wagtails I consider to be that of analogy rather than of affinity. The form of the wings and tail, the absence of elongated tertiaries, and the character of the nestling-plumage are alike opposed to the association of them with the true Motacilline birds, or Pipits and Wagtails. They have Myiotherine affinities, as more especially shown by the colouring of *H. ruficapillus,* Temm. (Pl. Col. 534).

"588. HENICURUS NIGRIFRONS" must be erased, it being *H. scouleri* in immature plumage.

The Indian species of *Motacilla* and *Budytes* have already been treated of by me in this journal (Ibis, 1865, pp. 48–50). There are six of the one, *Motacilla maderaspatana, M. hodgsoni, M. luzoniensis, M. personata, M. dukhunensis,* and *M. alba* (*vera*), and three of the other, *Budytes aureocapilla* (Vieillot) *, (*B. citreoloides,* Gould, B. As. pt. xvii. pl.), *B. melanocephala,* and *B. viridis.* The last is identical with the European *B. cinereocapilla,* as remarked by Strickland in 1844 (Ann. Mag. N. H. xiv. p. 115); and its phases of plumage, as observed by myself in Bengal, are precisely those described by Dr. A. Leith Adams (Ibis, 1864, p. 20) as occurring in Egypt. All the males of this race attain the colour assigned to *B. cinereocapilla* in spring, or just before taking their departure in Lower Bengal. Mr. Swinhoe (Ibis, 1864, p. 422) has designated the Malayan race *B. melanotis*; but surely this should be the Sumatran *Motacilla bistrigata* of Raffles, whose description indicates the *B. viridis* (Trans. Linn. Soc. xiii. p. 312). Malayan specimens, in winter dress, which I have recently examined, show no peculiarity that I can perceive; and Messrs. Mottley and Dillwyn describe the Bornean race, which Mr. Sclater (P. Z. S. 1863, p. 214) refers to *B. viridis,* as, "Above, body olive-green, head grey; below, chin whitish, and thence to tail bright yellow" †. Mr. Gould has a very large black-headed *Budytes* from Southern India, which appears to be distinct from the ordinary *B. melanocephala*; and he has recently called my attention to two skins in the British Museum (one of them marked from Behar), presented by Mr. Hodgson, which are remarkable for the extreme paleness of the grey cap, and exemplify yet another particular race in his opinion.

I observe that Dr. Cabanis (Mus. Hein. i. p. 12) gives *M. hodgsoni,* "Blyth," as a synonym of *M. luzoniensis.* This is doubly a mistake, for I did not name the species. *M. lugubris,* Pallas, is given from Kashmir in Mr. Vigne's list of birds from that province and its vicinity (P. Z. S. 1841, p. 431). It is doubtless a mistake. In the India Museum are specimens of *M. maderaspatana* from Kemaon and Western Himalaya; of *M. dukhunensis* from Shikarpore and Kemaon; and of *M. alba* (*vera*) from Ghuzni, Kemaon, Kashmir, and Sinde; so that this also has to be included in the list of Indian *Motacillæ*. In the young of *M. maderaspatana*, the black portion of the plumage is replaced by darkish-ashy: specimen from Nipâl. (For figures of *M. personata* and *M. dukhunensis*, vide Gould's B. As. pt. xiii.)

---

* *Cf.* Pucheran, Arch. du Mus. vii. p. 377.

† Mr. C. A. Wright (Ibis, 1864, pp. 62, 63) notices an alleged peculiarity of voice on the part of *B. melanocephala.* Strickland, in 1844 (Ann. Mag. N. H. xiv. p. 115), first referred the British race to *Motacilla campestris* of Pallas, whose description would seem to apply to the young in its first plumage (Z. R.-A. i. p. 504). And a nearly similar race exists in the as yet undescribed *B. taivana,* Swinhoe, of Formosa (P. Z. S. 1863, pp. 274, 334; Ibis, 1866, p. 138). *Motacilla Kalericzencki,* Krynicki (Bull. Mosc. 1839, taf. xx.), = *B. melanocephala,* Licht. (*ibid.,* xxiii. pt. ii. p. 570, taf. viii. f. 3), respectively from the Taurus and the Sea of Aral.

595. NEMORICOLA INDICA (Gmelin); Gould, B. As. pt. xiv. pl. This species occurs also near Pekin (Swinhoe). Mr. Gould changes the name to *Limonidromus*.

596. PIPASTES AGILIS (Sykes), Temm. & Schl. Faun. Japon., *Aves*, tab. xxiii.; Gould, B. As. pt. xvii. pl.

Doubtless the race obtained by Mr. Wallace in Batchian (P. Z. S. 1860, p. 350). Sykes's type specimen in the India Museum has, however, more the appearance of the European *P. trivialis*. I have never heard a Tree-Pipit sing in India; but the song and manners ascribed to *Anthus rufulus* by Sir R. H. Schomburgk (Ibis, 1864, p. 249) are evidently those of a *Pipastes*. The habits and song of *Corydalla rufula* are much the same as in *Anthus pratensis*, as indeed is implied by Dr. Jerdon's description of them.

600. CORYDALLA RUFULA (Vieillot); *Anthus pallescens*, Sundevall.

Dr. Pucheran (Arch. du Mus. vii. p. 362) is inclined to identify *Anthus rufulus*, Vieillot, with *C. striolata*, nobis. Vieillot's figure (Gal. des Ois. pl. 161) is extravagantly coloured; but his description suits the common Bengal bird, and he gives Bengal as the habitat.

605. ANTHUS CERVINUS (Pallas), Middendorff, Sib. Reise, tab. xiv. figs. 1–3; Bree, B. Eur. ii. p. 155, pl.; Jaubert, Rich. Orn. Mid. Fr. p. 284, pl. Syn. *A. cecilii*, Audouin, *A. rufogularis*, Brehm, *A. ruficollis*, Vieillot.

To this bird, in winter plumage, I feel confident that the alleged Siamese *A. pratensis* (*cf.* P. Z. S. 1859, p. 151, and Ibis, 1864, p. 249) should be referred*. Mr. Gould (B. G. B. pt. iii.) remarks of *A. pratensis*, "I question whether it is ever found in India, and I fear I must have misled Mr. Yarrell when I stated that I had seen specimens from thence. Temminck," he adds, "includes it in his catalogue of the birds of Japan; but the Japanese bird is now recognized as distinct, and is called *A. japonicus*." M. Anatole de Demidoff, in his 'Voyage dans la Russie Méridionale' (p. 159), does not consider *A. cervinus* to be sufficiently distinct from *A. pratensis*—a course in which he is followed by several Russian and German ornithologists (*cf.* Eversmann, Bull. Mosc. 1850, ii. p. 570; J. f. O. 1853, p. 289, and Pässler, J. f. O. 1859, p. 464)! I have recently seen undoubted specimens of *Anthus pratensis* from North-western India†.

Of the genera of Pipits recognized by Dr. Jerdon, *Pipastes* and *Anthus* are birds which have a double moult, while *Corydalla* and *Agrodroma*, if not also *Heterura*, have but a single moult; and the young of *Corydalla*, if not also *Agrodroma*, have pale margins to the upper plumage, like young Larks, but do not, like the latter, shed the primaries and rectrices at the first moult. These are short and of a nestling character in young Larks, not so in the young *Corydallæ*.

608. COCHOA VIRIDIS, Hodgson; Gray and Mitchell, Ill. Gen. Birds, pl. 68.

A Javan species of this genus exists in *Pteruthius azureus*, Temm. Pl. Col. 274.

609. PTERUTHIUS ERYTHROPTERUS.

A closely allied species to this was obtained by Col. Tickell upon Moulé-yit Mountain, Tenasserim, *P. æralatus*, Tickell (J. A. S. B. xxiv. p. 267).

---

* In Mr. Sperling's notice (Ibis, 1864, p. 279), under the head of *A. cervinus*, the name *A. pratensis* should surely be substituted for *A. arboreus*.

† I allow this passage to stand as it was written: but Mr. Gould has recently shown me that the ordinary Himalayan species *A. rosaceus*, Hodgson, with yellow axillaries, is distinct from that commonly referred to *A. cervinus*, which latter should probably be erased from the Indian list.

611. ALLOTRIUS MELANOTIS, Hodgson, is quite distinct from its "double," *A. ænobarbus*, of Java. Mr. Wallace has specimens of both species. Mr. Hodgson figures the egg as white, thickly sprinkled with bright amethystine.

614. LIOTHRIX LUTEUS is "often seen alive in cages from Canton; said to be brought from the interior," according to Mr. Swinhoe (P. Z. S. 1863, p. 298; Ibis, 1865, p. 349).

615, 616, 617, 623, and 624. LIOTHRIX ARGENTAURIS, SIVA STRIGULA, S. CYANOUROPTERA, IXULUS FLAVICOLLIS, and I. OCCIPITALIS, Gould, B. As. pt. xv. pls.

L. argentauris and *S. cyanouroptera* were obtained by Col. Tickell upon Moulé-yit Mountain, Tenasserim.

Mr. Hodgson figures the nest of *Liothrix argentauris* suspended like that of an Oriole; and the egg of *Siva strigula* as blue, with rufous specks (not unlike a Blackbird's); of *S. cyanouroptera* as green, with large rufous spots (nest in a forked branch); of *M. castaneiceps* white, with rufous specks, tending to form a zone at the large end; and of *Proparus chryseus* as dull white, with a few dusky spots.

620. MINLA CINEREA has the throat and lower parts of a very bright yellow in newly moulted plumage.

625. IXULUS STRIATUS.

With regard to Col. Tickell's remarks (Ibis, 1863, p. 113) on the nomenclature of this species, how could I adopt such a name as *Pycnonotus nanus* for it? As far as possible, I adhered to the MS. names Col. Tickell had imposed.

627. YUHINA OCCIPITALIS, Hodgson; Gould, B. As. pt. xv. pl.

629. MYZORNIS PYRRHOURA, Hodgson; *Yuhina pyrrhoura*, Gray & Mitch. Ill. Gen. Birds, pl. 53.

630. HERPORNIS (errore *Erpornis*) XANTHOLEUCA.

This curious form comes nearest, I think, to *Zosterops*. The range of the species extends to Formosa (Ibis, 1866, p. 394).

631. ZOSTEROPS PALPEBROSUS.

The Tenasserim *Zosterops* is one of three or more closely allied races, which present certain constant differences. *Z. flavus*, of Java, is black-tailed; that of Borneo (P. Z. S. 1863,

p. 219) has no black on the lores; and *Z. siamensis*, nobis, the Tenasserim form, has black lores. Mr. Wallace has specimens of the three races. The corresponding races of Sumatra, the Philippines, and perhaps other islands require comparison.

637. Lophophanes dichrous.

Of the numerous Himalayan Tits, this one approximates most nearly to the European *L. cristatus* and its American analogue *L. wollweberi* (Baird, B. Am. pl. 53).

640. Lophophanes rufonuchalis.

What is the Titmouse from one of the lesser ranges near the valley of Kashmir, approximated to this by Dr. Adams (P. Z. S. 1859, p. 176)? "Crested; total length 5 in. Iris brick-red; bill bluish-black; forehead and between ear-coverts a dirty white; all upper parts, wings, and tail leaden-ash; breast, belly, and vent ochrey-white; tail moderate, slightly forked; legs and claws leaden-blue."

642. Parus æmodius proves to be a true crested *Lophophanes*; there is a skin in the British Museum*.

645. Parus cinereus.

This species is remarkable for its wide range of distribution, extending even to Lombok and Flores, according to Mr. Wallace. In China, Mr. Swinhoe remarks that it blends with *P. minor* (P. Z. S. 1863, p. 270).

Melaniparus semilarvatus, Salvadori, is a lately described species "from the Himalaya" (*cf.* Ibis, 1866, p. 415).

654. Accentor strophiatus.

Mr. Hodgson figures a greenish-blue egg.

658. Corvus tibetanus is distinct from *C. corax*. Specimen in British Museum.

660. Corvus culminatus, Sykes; *C. levaillanti*, Lesson, Pucheran, Rev. Zool. 1853, p. 547†.

---

* *Parus elegans*, Lesson, from the Philippines, will fall under *Machlolophus* (*cf.* Pucheran, Rev. Zool. 1854, p. 68). It is doubtless identical with *P. quadrivittatus*, Lafresnaye (Rev. Zool. 1840, p. 129).

† This species certainly inhabits the Andamán Islands, although *C. andamensis*, Tytler, may be distinct (Ibis, 1866, p. 428). I sent an Andamán specimen to Mr. Swinhoe, who has noticed it in P. Z. S. 1863, p. 305.

662. Corvus tenuirostris, Moore; *C. enca*, Horsfield.

This is, as I have before remarked (Ibis, 1865, p. 32), a Malayan bird, the range of which extends to Lombok, Flores, Ternate, and Timor, according to Mr. Wallace. It is rightly expunged from Dr. Jerdon's list in his 'Appendix'(ii. p. 873).

663. Corvus splendens.

Dr. Jerdon's account of the habits of this species is excellent. I have seen several nests composed more or less, and two almost exclusively, of the wires taken from soda-water bottles, which had been purloined from the heaps of these wires commonly set aside by the native servants till they amount to a saleable quantity (J. A. S. B. xxvii. p. 290). At Akyab this Crow abounds, and also (as I was informed by Mr. W. T. Blanford) at Mandell (high up the Irawádi). At Khyuk Phou a party of seven individuals made their appearance on the 7th of December, 1856, which have since stocked the neighbourhood*. Elsewhere in Arakan this Crow has still no representative; but across the mountains which divide that province from Pegu, in the valley of the Irawádi, again at Moulmein, Tavai, and as far south as Mergui, as also in Siam, it is replaced by a wholly black race, quite similar both in form and habit, but having a much shriller voice (a sort of *shrieking* caw), if possible still more inharmonious than that of the other. There is just a very faint tinge of ash-colour on the nape and breast, where the common Indian Crow is pure cinereous; but this must be specially looked for to be remarked. The Crows of Ceylon are also *melanoid*; but whether they differ in voice from those of continental India I am unaware. Except as regards the difference of voice, the Burmese and Siamese Crows may be said to hold the same relationship to the Indian race which *C. corvus* does to *C. cornix*, or *C. spermolegus* to *C. monedula*. The melanite race of *C. splendens* is erroneously referred to *C. culminatus* by Schomburgk (Ibis, 1864, p. 252).

According to Temminck, this Crow has a wide distribution over the continent of India and the islands of the Asiatic Archipelago. The latter is a mistake, which is not repeated by

---

* The precise date is given from the diary of my friend Major Ripley.

Prof. Schlegel. Though found so low as Mergui (the black race), I have been assured that it does not occur in the Malayan Peninsula, at least at Penang, Malacca, and Singapore. Neither does it rid Vultures and Adjutants of their parasites (as Temminck avers); but I have seen a solitary *Gyps bengalensis* tearing at a bit of some animal refuse, which was teased and tormented by a party of some twenty of these Crows, some alighting on its back and pecking at it, and trying every device to draw its attention from what it held under one foot.

664. Corvus frugilegus.

The true British Rook, distinct alike from *C. agricola* of Palestine and *C. pastinator* of China and Japan.

666. Nucifraga hemispila.

Mr. Hodgson gives two coloured figures of a fine allied species of Nutcracker, which is wholly unspotted; I shall term it

Nucifraga immaculata, sp. nov.

Uniform ruddy-brown, with darker cap and blackish wings without markings; lower tail-coverts white, and all the rectrices but the middle pair tipped with white for two-thirds of the length of the feather on the outermost pair, and successively less on the others.

668. Pica bottanensis, Deless.; Gould, B. As. pt. xv. pl.

This is not *P. tibetana*, Hodgson; for the latter is figured by that naturalist as having no white on the scapulars. The Afghan Magpie, *P. bactriana*, Bonap., hardly differs from the European race, but is duller in colouring, with the narrow band above the tail white instead of grey. *P. bottanensis* is considerably larger, with proportionally longer wings, shorter tail, and much larger feet. Mr. Swinhoe has made some remarks on the Magpies of China, Amuria, Kamtschatka, Japan, and Formosa (P. Z. S. 1863, p. 303). *P. bottanensis* is the most distinct from the others of Europe and Asia, next to *P. tibetana*. The last is carefully figured in one of Mr. Hodgson's drawings in the British Museum, with the remarkable peculiarity before noticed of having no white on the scapulars; the tail also is shorter than in other Magpies, and quite uniformly glossed, without that steel-blue band near the end seen in others of the genus. Even another species is figured by Mr. Gould (B. As. pt. xiv.) as *P. leucoptera* from Eastern Siberia, which is remarkable for having the inner webs of the primaries white to the end, or with merely an exceedingly slight terminal dark border.

The nomenclature of the *Urocissæ* (vol. ii. pp. 309–311) is rectified in the 'Appendix' (p. 873), and the species have been figured by Mr. Gould (B. As. pt. xiii.); but the bills of the first three should be represented as deep coral-red, not orange. *U. magnirostris* of Burma and Siam has a dark, blackish iris, while the specimen of *U. sinensis* in the Zoological Gardens has a bright reddish hazel iris. (See, however, Swinhoe on this subject, 'Ibis,' 1865, p. 349.) A fifth beautiful race exists in Mr. Swinhoe's *U. cærulea* of Formosa.

Mr. Gould remarks, of the genus *Garrulus*, that "the fauna of India claims the *G. bispecularis*, the *G. lanceolatus*, and the *G. lidthi*" (B. G. B. pt. i.). The habitat of *G. lidthi*, Bonap. (P. Z. S. 1850, p. 80, *Aves*, pl. xvii.), is still unknown, I believe; and so remarkable a bird could scarcely have escaped observation in the Himálaya. No doubt it probably inhabits some part of Middle Asia; but Middle Asia is not exactly synonymous with "India."

673. Cissa sinensis, Bodd.; Gould, B. As. pt. ix. pl.

The nest and eggs, as figured by Mr. Hodgson, are very Jay-like,—the former placed upon the radiating primary branchlets of a bamboo; the latter brownish, with thickly-set minute dark brown specks. *Urocissa* also builds a Jay's nest, as distinguished from the covered fabric of a Magpie.

676. Dendrocitta sinensis.

Whether this name should be replaced by that of *D. himalayensis* (Ibis, 1865, p. 45) is still doubtful; for the supposed Chinese species is from Formosa, *D. sinensis*, var. *formosæ*, Swinhoe (Ibis, 1866, pp. 296, 394).

677. Dendrocitta frontalis, Macclelland; Gray and Mitchell, Ill. Gen. B. pl. 75.

D. occipitalis, Müller, and *D. rufigaster,* Gould, are identical. *D. bayleyi,* Tytler (J. A. S. B. xxxii. p. 89, and Ibis, 1863, pp. 119–464), is a well-marked small species from the Andamáns.

679. Fregilus himalayanus.

May not this be Mr. Swinhoe's species from North China (P. Z. S. 1863, p. 303), as also that of Afghánistân, where it is stated by Capt. T. Hutton (J. A. S. B. xvi. p. 778) to be abundant during the winter months, arriving in November from the hills to the northward, and departing again about March.

681. Sturnus indicus.

Starlings occur sufficiently near to Calcutta to be sold by the bird-dealers as no rarity, along with Rose Ousels and different Mainas which are taken in the neighbourhood. I have been assured that they occur commonly so near as at Ránigánge. The Indian Starling differs very slightly from *S. vulgaris,* but has a longer and more acuminate bill. A third race, which Mr. Gould has from Erzroom, is identical with the Starling of Afghánistân, and more brilliantly coloured than the others. When series of each are seen together, the difference is sufficiently recognizable. The Starling of North-eastern Asia may perhaps constitute a fourth of these closely allied races.

682. Sturnus unicolor.

I have considerable misgivings that old specimens of *S. indicus,* with long pointed feathers, having their terminal pale spots obsolete, have been mistaken for *S. unicolor;* and I know this to be the case with the supposed *S. unicolor* from Kandahar (J. A. S. B. xvi. p. 779), the spotless specimen being, in this instance, the bright-coloured Afghân Starling. Dr. Bree's figure, intended for *S. unicolor,* appears to me to represent such an example of *S. vulgaris.*

683. Sturnopastor contra (Linn.); Pl. Enl. 281.

S. jalla of Java differs in having the abdominal region pure white; and *S. superciliaris* is the Tenasserim race, with a browner back, extending to Siam, where the white on the forehead and eyebrows increases in quantity; or perhaps adequate series from Siam and the Tenasserim provinces would not prove to differ. Again, there are three races in *Temenuchus melanopterus* (Daud.), of Java, which is pure black and white, *T. tricolor* (Horsf.), of Java, which has a grey back, and *T. burmannicus*, Jerdon, which has considerably less of white on its plumage; but the last name will not, I think, stand, as the *Pastor peguanus*, Lesson (Tr. d'Orn. p. 404), seems to be founded on the young of the same species. *Sturnopastor moorei*, Tytler (Ann. Mag. N. H. 1854, xiv. p. 176), *S. niger*, nobis (Ibis, 1859, p. 211), is founded on cage-specimens of *S. contra* which had assumed a black plumage, the effect probably of some particular kind of diet, as is the case with Bullfinches fed too much upon hempseed. One given to me by Col. Tytler reassumed the ordinary colouring of *S. contra* at its next moult (Ibis, 1860, p. 99). Dr. Jerdon only notices incidentally (vol. i. p. 62) that this species commonly builds in society, several of its huge nests near together *.

685. ACRIDOTHERES GINGINIANUS (Lath.); "*Gracula cinerea*, Cuv.," Pucheran.

686. ACRIDOTHERES FUSCUS (Wagler).

A. ater, Vieillot, "totus niger, caudâ apice albâ," from Pondicherry, would seem to denote the Javan *Pastor griseus* of Horsfield, with an erroneous habitat. *A. cinereus* of Celebes is another closely allied race. *A. fuscus* may occasionally be seen in the streets of Calcutta, and is the prevalent species in the neighbourhood of the salt-water lake in the immediate vicinity. Col. Tytler informed me that he had seen *A. ginginianus* within the ramparts of Fort William; but its appearance there is rare and quite exceptional. He has also given an interesting account of these birds becoming accustomed to target-practice (Ann. Mag, N. H. 1854, xiv. p. 174).

687. TEMENUCHUS PAGODARUM (Gmel.); Vieill. Gal. des Ois. pl. 148.

688. TEMENUCHUS MALABARICUS.

Dr. Cabanis (Mus. Hein. i. p. 205) erroneously refers *T. blythi* (no. 689) to this species. *Hetærornis albofrontata*, Layard (Ann. Mag. N. H. 1854, xiii. p. 217), from Ceylon, is another very distinct species of *Temenuchus*.

---

* *S. nigricollis* of Siam and Southern China would appear to resemble *S. contra* in its mode of building (Ibis, 1866, p. 293).

690. PASTOR ROSEUS.

The young of this species in the first or nestling-plumage was sent to me from Ceylon by Mr. Layard. Dr. Jerdon remarks that most of the specimens met with in India are young birds in imperfect plumage. He alludes rather to those in winter garb, wherein the colours of the plumage are overlaid with the brown edgings to the feathers; as the latter disappear, the colouring brightens considerably, and there is hardly any external difference between the sexes.

692. EULABES RELIGIOSA is more common in Ceylon than *E. ptilogenys*. The egg is described by Mr. Day ('Land of the Permauls,' Madras: 1863, p. 464) as being of "a blue colour, $1 \times \frac{8}{10}$ inch in size."

693. EULABES INTERMEDIA (A. Hay); *Gracula religiosa*, Vieill. Gal. des Ois. pl. 95, is the species of the Andaman and Nicobar Islands, and is therefore the Nicobar bird noticed as *Gracula indica* in the narrative of the 'Novara' Expedition, but called *G. javana* in the special ornithological part of the voyage (Von Pelzeln, Reise 'Novara,' i. p. 88). I once received a living albino from one of the Nicobar Islands.

695 and 696. PLOCEUS MANYAR and P. BENGALENSIS.

These two species commonly associate in the same flock. The *P. bengalensis* of Sundevall is *P. baya*. The true *P. philippinus* (L.), *Loxia hypoxantha*, Daud., was sent from Siam by the late Sir R. H. Schomburgk. *Loxia javanensis*, Lesson, is identified with *P. philippinus* (*verus*) by Dr. Pucheran (Rev. Zool. 1854, p. 67).

697. The true *Munia malacca* from Borneo (in Mr. Wallace's Collection) is distinct from the Indian race; and another of the same particular type, *M. formosana*, is described by Mr. Swinhoe (Ibis, 1865, p. 356).

700. MUNIA PECTORALIS.

The Ceylon bird described under this name, with a mark of doubt (J. A. S. B. xx. p. 178), I have since designated *M. kelaarti*.

701. MUNIA STRIATA is common in the Andamáns.

702. MUNIA ACUTICAUDA inhabits China and Formosa, if not also Japan (Ibis, 1863, p. 379, and 1865, p. 348).

705. ESTRELDA FORMOSA has been taken in the neighbourhood of Lucknow (where I have procured it), but much less plentifully than *E. amandava.* At Omerkántak, near the source of the Nerbudda, it occurs very abundantly. There are three allied red species, *E. amandava* of India, *E. punicea* of Java, and *E. flavidiventris* of Timor. Which is it that is brought to China from the Straits in large numbers as a cage-bird (Ibis, 1865, p. 293)?

706. PASSER INDICUS.

The Nubian Sparrow appears to be identical (Ibis, 1865, p. 44) with the Indian. "When first at Akyab, during the rainy season, I remarked *P. montanus* to be the common Sparrow about the streets, considerably outnumbering *P. indicus*; whereas in the cold season the latter is the prevalent Sparrow about Akyab. Southwards, however, I only on two occasions noticed the common Indian Sparrow (once at Moulmein, and once in a Burmese village higher up the Salouin); whereas *P. montanus* was in extreme abundance everywhere, extending southward to Singapore, and likewise inhabiting Java; with precisely the same habits as the other. I observed it, numerously, as far south as Tavai and Mergui" (but it is unknown in Bengal and the Peninsula of India). "At Thyet Myo, on the Irawádi, Dr. Jerdon observed not only *P. indicus* and *P. montanus* common, but also the very pretty little *P. flaveolus.* When at Pahpoon, in Upper Martaban, in the month of November, three or four pairs of *P. montanus* appeared for one day only, entering the few human abodes in the most familiar manner, and apparently seeking convenient nooks for nesting-places; but I saw no others in that wild forest region" (J. A. S. B. xxxii. p. 77). Mr. Gould quotes a part of the foregoing passage (in his 'Birds of Great Britain,' pt. iv.), but, confounding Burma with India, leads his readers to suppose that *P. montanus* inhabits the latter country westward of the Bay of Bengal; whereas it does not occur in India southward of the Sikhim

Himálaya. Dr. Cabanis gives it from Manilla, and Mr. Swinhoe from Formosa (Ibis, 1866, p. 401).

707. PASSER SALICARIUS.

In a letter lately received from Hansi, Dr. Jerdon remarks that this bird is "abundant, in huge flocks, westward from Delhi." Wherever it occurs, it would appear to be much more highly gregarious than *P. domesticus*.

708. PASSER CINNAMOMEUS only differs from *P. rutilans* (Temm. Pl. Col. 588. fig. 2) of China by the yellow tinge on the cheeks and lower parts. It is therefore, probably, a Tree-, and not a House-Sparrow.

711. PASSER FLAVICOLLIS.

The closely allied South African *Gymnorhis superciliaris*, nobis (J. A. S. B. 1845, xiv. p. 553), *Pyrgita petronoides*, Lafr., B. (Consp. Av. i. p. 513), *P. petronella*, B. (*ibid.*; C. R. xxxvii. p. 916), and *Xanthodina flavigula*, Sundevall (Œfvers. K. V. Acad. Förh. 1849, p. 98), is a typical member of Hodgson's genus *Gymnorhis* (J. A. S. B. 1844), founded on the Indian *P. flavicollis*. I have added a third of the same minimum type as *P. canicapillus* (Ibis, 1865, p. 46), the habitat of which is unknown. These birds are linked to the ordinary Sparrows by the African *Passer* (or *Pyrgitopsis*) *simplex* (Licht.), which has an intermediate form of bill and wants the yellow pectoral spot.

716. EMBERIZA HUTTONI.

Mr. Gould has good specimens of this species, which is nearly allied to *E. cinerea*, Strickl. I suspect that *E. hortulana* from India (no. 715) needs comparing with *E. cernutii*, De Filippi, from Armenia and Persia (*cf.* Ibis, 1864, p. 400).

717. EMBERIZA SPODIOCEPHALA, Pallas; Middend. Sib. Reise, ii. tab. xiii. figs. 5–8, *cum ovis*; *E. personata*, Temm. Pl. Col. 580, Faun. Japon., *Aves*, pl. 59 B.; *E. sordida*, Hodgson; *E. hortulana*, Gray.

719. EMBERIZA FUCATA, Pallas; Temm. & Schl. Faun. Japon., *Aves*, tab. lvii.; also *E. rutila* in tab. lvi.

720. EMBERIZA PUSILLA, Pallas; Middend. Sib. Reise, ii. tab. xiii. fig. 4 (*ova*); Jaubert, Rich. Orn. Mid. France, p. 163.

722. Euspiza luteola (Sparrm.); Gray and Mitchell, Ill. Gen. Birds, pl. 91.

723. Euspiza aureola (Pall.); *Emberiza aureola,* Middend. Sib. Reise, tab. xiii. fig. 9 (*ovum*); Radde, Reisen, taf. iv. fig. 2, *a–h.*

726. Hesperiphona affinis.

The male of this species is figured in one of Mr. Hodgson's drawings as *H. icterioides*; and the lower figure in Mr. Gould's plate (B. As. pt. iii.) evidently represents a female of *H. affinis,* but with an ashy hood; while the upper figure behind that of the male represents the female of *H. icterioides.* A second American species of this genus, akin to *H. vespertinus,* is *Coccothraustes abeillii,* Lesson; *C. maculipennis,* Sclater (P. Z. S. 1860, p. 251, Aves, pl. clxiii.), from Mexico (*cf.* Ibis, 1866, p. 206).

727. Mycerobas melanoxanthus (Hodgson); Gray and Mitchell, Ill. Gen. Birds, pl. lxxxviii.

Of Mr. Gould's two figures (B. As. pt. iii.) with spotted underparts, I believe that the yellower example represents the immature plumage, and the paler that of the mature female.

730. Pyrrhula erythaca, Blyth, J. A. S. B. xxxii. p. 459, and Ibis, 1863, pl. x. p. 440.

The tail in the figure just cited is wrongly represented, as it exactly resembles in shape that of *P. nipalensis.*

734. Loxia himalayana.

A White-winged Crossbill has also been received from the Himálaya, which Bonaparte and Schlegel (Mon. des Loxiens, pl. 10) refer to the North American *L. leucoptera,* Gm., and not to the North Asiatic *L. bifasciata,* Nilsson. Mr. Gould, however (in his 'Birds of Great Britain, pt. v.), assigns it to the latter race, and remarks that it is doubtless the Amurian *L. leucoptera* of Von Schrenck. The distinctions between the two birds were well pointed out by M. de Sélys-Longchamps some five-and-twenty years since (Faune Belge, p. 77).

735. Hæmatospiza sipahi (Hodgs.); Bp. et Schl. Mon. Loxiens, pl. 26.

736. PROPYRRHULA SUBBIMACHALA (Hodgs.); Bp. et Schl. Mon. Loxiens, pl. 13.

737. CARPODACUS RUBICILLA (Guldenst.); Bp. et. Schl. Mon. Loxiens, pl. 26.

738. CARPODACUS ERYTHRINUS (Pall.); Bp. et Schl. Mon. Loxiens. pl. 14.

The breeding of this bird in the Botanical Gardens at Helsingfors is mentioned (Ibis, 1861, p. 111); but its alleged "low flute-like voice" rather puzzles me. It is a common cage-bird in India, where its notes are as I have described them (and as quoted by Dr. Jerdon). The *C. roseus* of Dr. A. Leith Adams (P. Z. S. 1859, p. 177) must surely refer to this species; and his second species (no. 68) is probably *Propasser rhodochlamys.*

739. PROPASSER RHODOPEPLUS (Vigors); Bp. et Schl. Mon. Loxiens, pl. 21.

740. PROPASSER THURA (Bp.); Moore, P. Z. S. 1855, Aves, pls. 113, 114.

P. frontalis, nobis (no. 744), is identical with this species.

741. PROPASSER RHODOCHLAMYS (Brandt); Bp. et Schl. Mon. Loxiens, pls. 24, 25.

Dr. Cabanis notes it from Siberia.

742. PROPASSER RHODOCHROUS (Vigors); Bp. et. Schl. Mon. Loxiens, pl. 28.

745. PROPASSER MURRAYI, nobis, J. A. S. B. xxxii. p. 458.

There remains a female specimen in the Asiatic Society's Museum at Calcutta, which I had considered to be that of *P. thura*, and which indicates another species yet to be described (*cf.* Ibis, 1865, p. 44).

746. PROCARDUELIS NIPALENSIS (Hodgs.); *Pyrrha saturata*, Bp. et Schl. Mon. Loxiens, pl. 29.

A second species of *Procarduelis* is referred to by Dr. F. Stoliczka as inhabiting the eastern parts of Ladakh (J. A. S. B. 1865, xxxiv. p. 111). (*Cf.* Ibis, 1866, p. 412.)

747. PYRRHOSPIZA PUNICEA, Hodgs.; Bp. et Schl. Mon. Loxiens, pls. 27, 28).

748. CALLACANTHIS BURTONI.

This seems to be not distantly allied to *Erythrospiza rhodoptera* (Licht.); *Fringilla sanguinea,* Gould (Bp. et Schl. Mon. Loxiens, pls. 30, 31); type of *Rhodopechys,* Cabanis, which may be expected to turn up in Kashmir or Ladakh.

751. METOPONIA PUSILLA (Pall.); *Orœgithus pusillus,* Cab. Journ. für Ornith. 1854, taf. i.

I observe that Mr. Tristram refers this bird to *Serinus* (P. Z. S. 1864, p. 447), as I did formerly (J. A. S. B. xxiv. p. 257); and he describes a *Serinus aurifrons,*—the present species being the *S.* (?) *aurifrons* (no. 680) of my 'Catalogue of the Birds in the Asiatic Society's Museum' at Calcutta.

753. FRINGILLAUDA NEMORICOLA.

Not uncommon in Darjeeling collections. It is a long-winged Ground-Linnet, without any red in its plumage—and is in no respect akin to the Larks, that I can perceive. Dr. A. L. Adams remarks that "its call-note is like the Linnet's" (P. Z. S. 1864, p. 184); elsewhere that "the chirp is like the Snow Flake (Nanee), and flight exactly similar" (P. Z. S. 1858, p. 482). But he does not note the Snowfleck in either of his lists, and may not have here meant *Plectrophanes nivalis,* but *Montifringilla adamsi.* He adds that it is strictly an Himalayan bird, plentiful at high elevations at all seasons, and feeding around the margin of the melting snow. Generally seen in large flocks, flitting from place to place like Snow-Buntings. As winter advances, they migrate southward, and are found in the lower regions.

755. MIRAFRA AFFINIS, Jerdon; "*Alauda coromandeliana,* Cuv.," Pucheran, Rev. Zool. 1854, p. 63.

756. MIRAFRA ERYTHROPTERA ocurs at Sáhárunpore.

759. AMMOMANES LUSITANICA is not *A. pallida* as I suggested in the 'Appendix' (p. 874).

760. PYRRHULAUDA GRISEA (Scop.); "*Fringilla melanoleuca,* Lesson," Pucheran, Rev. Zool. 1854, p. 65.

Of the genus *Melanocorypha* (vol. ii. p. 427), two species are inserted by Dr. Jerdon in his Appendix, viz.:—

MELANOCORYPHA TATARICA (Pallas); and

M. TORQUATA, nobis, J. A. S. B. xiii. p. 962, xv. p. 476. This is not *Alauda bimaculata,* Ménétriés, which can be only doubtfully separated from *Calandrella brachydactyla* (L.). *M. torquata* resembles *M. calandra,* but is smaller, with proportionally shorter tail, having much less white on its outermost feathers. A specimen lately received from Dr. Jerdon has barely a trace of the usual great black mark on each side of the breast, which is sometimes very large, extending across to meet its opposite in front, as in the example from which I bestowed the name upon the species. In a letter from Hansi, Dr. Jerdon writes, "I have obtained this species. It is not abundant here, but is said to be more common further west and south. The Asiatic species of *Melanocorypha* are four in number:—1. *M. tatarica* (Pallas). 2. *M. mongolica* (Pallas); Radde, Reisen, &c. taf. iii. f. 1; *Alauda sinensis,* Waterhouse, P. Z. S. 1839, p. 60. 3. *M. calandra* (L.); *Alauda torquata,* Gmelin. 4. *M. torquata,* nobis. The *Alauda sibirica,* Pallas, is a large typical species of *Calandrella*[*].

761. ALAUDULA[†] RAYTAL.

This cannot be the *Calandrella pispoletta* (Pallas) of Mr. Swinhoe (P. Z. S. 1863, p. 271), described as having a more conical bill and larger tail than the European *C. brachydactyla.* Again, the "Raytal" of Mr. Hodgson's drawings would seem different—the structure being similar, but the colouring much more as in *Alauda arvensis. A. raytal* is noted by Dr. A. Leith Adams as "common in the wastes of Ladakh" (P. Z. S. 1859, p. 185). But his "Sand-Lark" (P. Z. S. 1858, p. 485) remains to be identified. "Abundant on the banks of the Indus and Northern Scinde. Size of the Grey Linnet. Colour a sandy brown; bill short and nearly conical; hind claw long and curved; tail moderate and slightly forked, the upper feathers of which are black," but otherwise similarly marked to *Galerita cristata.* I think that such a bird is figured in one of Dr. Buchanan Hamilton's drawings, now with the

---

[*] Mr. Gould has received from Afghánistân a large species, with a remarkably slender bill, which he designates *Melanocorypha maxima.*

[†] Not *Alaudala,* as in Horsfield's Catalogue, and copied by Dr. Jerdon.

Asiatic Society at Calcutta. Dr. Adams adds (*loc. cit.*), "On the lower Himalayan Range I saw on one occasion a species of Lark or Titlark, of the size of *Alauda arvensis*; colour of body was a sandy brown; but very distinguishing marks were a black throat and streak round the eyes of the same colour. The female was not so distinctly marked." This was, doubtless, an *Otocorys.*

764. OTOCORYS LONGIROSTRIS.

I have lately received two pairs from Dr. Jerdon, procured in the desert country north-west of Delhi. This species is distinguished from *O. penicillata* by its larger size, and by the black of the ear-coverts of the male not being continuous with that of the sides of the breast; the black auricular tufts are also less developed, and the bill decidedly differs in shape. The sexes differ considerably in colouring, and the females are smaller, the closed wings respectively measuring 5 inches and 4·5–4·75 inches. The female has no black except on the breast, where the gorget is very much smaller than in the male; crown, back, and wings dusky-brown, with pale margins to the feathers; a narrow white supercilium. *O. penicillata* was identified by Mr. Swinhoe with *O. alpestris* (P. Z. S. 1863, p. 271); but Mr. Tristram remarks that Swinhoe's Tientsin specimen is quite different from *O. penicillata,* and is, he supposes, the true *O. alpestris,* and not *O. penicillata* (P. Z. S. 1864, p. 435, and Ibis, 1866, p. 289). Mr. Tristram has shown also the distinctions of *O. bilopha* (Ibis, 1859, p. 421. I have compared the four Old-World races, and fully recognized their distinctness.

There is at present insufficient authority for including *O. penicillata* (no. 763) as an Indian bird.

766. ALAUDA TRIBORHYNCHA.

A specimen lately received from Dr. Jerdon thus marked by him, differs in no respect that I can perceive from the European *A. arvensis,* not even in the proportions of its primaries; and the closed wing measures 4·5 inches. Mr. Gould, however, refers it to *A. moreatica,* Bonap., in which I fail to perceive sufficient distinction.

767. Alauda gulgula.

A. cœlivox, Swinhoe, comes nearer, I find, to *A. malabarica* (no. 768) than to this, and has a pointed though scarcely elongated crest, while that of *A. gulgula* is the same as in *A. arvensis.*

769. Galerita cristata.

In my Catalogue of the Birds in the Asiatic Society's Museum at Calcutta (1849), I placed *G. chendoola* as a different species from *G. cristata.* This arose from having received an Algerian specimen as *G. cristata,* which proves to be *G. macrorhyncha,* Tristram (Ibis, 1859, p. 57); *G. randoni,* Loche (Rev. Zool. 1860, p. 150, pl. xi. fig. 2).

Galerita boysi, nobis, proves to be a good species. Examples from Lahore have the wing 3·5 in., and the rest in proportion; otherwise resembling *G. cristata.*

[To be continued.]

II.—*Egypt Revisited.* By E. Cavendish Taylor, M.A., F.Z.S.

I arrived at Alexandria, in Egypt, on the morning of December 15th, 1863, just ten years and one month after my first visit to that country, some ornithological notes on which were published in the first volume of 'The Ibis,' that for 1859. I found Alexandria very much increased, improved, and Europeanized during the decade that had elapsed since I had last seen it; but European influences seemed to have affected the climate also, for it rained the greater part of the time I stayed there, and the streets were filled with deep, black mud, such as I have never seen in any other town except Tunis. From Alexandria I went to Cairo by railway in seven hours. On my first visit, before the railway existed, the same journey took me, by boat, seven days. Cairo has resisted European innovations, and did not seem to me in the least changed. During the six weeks that I remained there, I devoted myself to looking up the ornithology of the immediate neighbourhood, and I got a good many birds worth having, especially three specimens of *Falco* *lanarius* and several species of *Saxicolæ*. I also made an excursion to Suez, and stayed there three or four days. Suez, where there are no trees, or bushes, but desert only, is decidedly the most non-aviferous place I ever was in: even the Hooded Crow (*Corvus cornix*), which swarms all over the rest of Egypt, was conspicuous by his absence; and I saw no Sparrows, nor, indeed, any small passerine bird, except the White Wagtail (*Motacilla alba*). However, the Raven of Egypt (*Corvus umbrinus*), notwithstanding the absence of trees, was not uncommon, and I shot a fine specimen. From Suez I returned to Cairo, and remained there till January 29th, 1864, when, in company with two other gentlemen, who were going up the Nile to collect birds, I took a boat, and started on the voyage up the river to the First Cataract at Assouan. The voyage thither lasted a month, and the return about the same time, so that I was in all two months on the Nile. I returned to Cairo at the end of March, and after staying there a few days went by railway to Mansoura, in the Delta, where I took a small boat, and went down the Eastern branch of the Nile to Damietta, where I remained some days collecting birds. Thence I returned to Alexandria, and departed for Smyrna on the 13th of April, having spent four months in Egypt.

The following is a list of the birds shot by myself, or members of my party, or otherwise fully identified by myself during my two visits to Egypt. The remarks refer to my observations on my second visit, except where the contrary is stated. My experience of Egypt extends only from the middle of November to the middle of April, and I never ascended the Nile beyond the First Cataract. Had I remained in the country a month later, I have no doubt but I should have added considerably to my list; for of course many species of birds go to Egypt to breed which are not found there in the winter, or even as early as the middle of April. I found the *Picidæ* and *Paridæ* totally unrepresented in the country. My experience does not agree with that of Dr. Adams (Ibis, 1864, pp. 3, 4) that the Date-Palm (*Phœnix dactylifera*) "is by no means a fitting resort for birds," and that you may wander for hours among groves of those trees, "and, except near the villages, not meet with a bird of any description;" for

I, on the contrary, always considered a grove of palm-trees a particularly good place to look for birds, and there is no tree in which I more often found the nest of the Egyptian Kite and Hooded Crow; and as to *Corvus umbrinus* I never saw its nest in any other sort of tree.

1. VULTUR MONACHUS, L. Cinereous Vulture.

On my second trip up the Nile I occasionally saw a solitary individual of this species among a flock of Griffons (*Gyps fulvus*). With a good glass it was easily identified when in repose, by its dark-coloured plumage and very differently shaped head.

2. GYPS FULVUS (Gmelin). Griffon-Vulture.

I found this Vulture very abundant on my second visit to Egypt, much more so indeed than on my first, owing, I suspect, to the cattle murrain, which was then raging, and which, though a dreadful visitation for the cattle and their owners, was a fine time for the Vultures. I suppose that this species breeds in Egypt, but I never detected it in the act.

3. NEOPHRON PERCNOPTERUS (L.). Egyptian Vulture.

I have nothing to add to my former remarks about this bird, which I found as abundant as ever on my return to Egypt.

4. AQUILA MOGILNIK (S. Gmelin). Imperial Eagle.

The specimen that I shot on my first visit was in the pale plumage of the second or third year. I did not see this species alive on my second visit, but saw the skins of two adult specimens on board a boat I visited. I never saw the Golden Eagle (*A. chrysaetus*) or the Tawny Eagle (*A. nævioides*) in Egypt.

5. AQUILA NÆVIA (Gmelin). Spotted Eagle.

Egypt seems to be the favourite winter quarters of this species; it is then so plentiful that I have seen as many as twenty all together in a grove of palm-trees. I do not know whether any individuals remain to breed, but I think probably not. They showed no signs of pairing as late as the end of March. This is an eminently arboreal Eagle, and is seldom seen among rocks. Reptiles and carrion are its usual food. The name *Spotted* Eagle is applicable only to the immature bird. With the exception perhaps of *Circaetus gallicus*, this species is much tamer and more easily approached than any other large raptorial bird in Egypt.

6. **Aquila pennata** (Gmelin). Booted Eagle.

This pretty little Eagle, which is by no means common in Egypt, is subject to considerable variation in colour; for a specimen shot by one of our party, which showed no sign of immaturity, was of a uniform dark brown.

7. **Pandion haliæetus** (L.). Osprey.

This cosmopolitan bird is naturally not absent from the avifauna of Egypt; I often saw it, but never succeeded in shooting a specimen, as it is very shy and wary.

8. **Circaetus gallicus** (Gmelin). Short-toed Eagle.

Not by any means abundant. I shot a very fine adult specimen among some rocks not far above Cairo. The legs and feet are dirty white, and not yellow.

9. **Buteo ferox** (S. Gmelin). Long-legged Buzzard.

This very fine, handsome Buzzard is pretty common, and generally distributed throughout the country, where I have no doubt it breeds. Specimens from Egypt seem to me to be larger, more rufous in colour, and with the tail-feathers of a brighter red than those I have seen from Syria and Asia Minor. I once saw a very fine example, with a splendid red tail, flying along with a large bird in its claws; on being fired at, it dropped its prey, which we secured and found to be a Shoveller-Duck, half killed.

10. **Buteo vulgaris**, Bechstein. Common Buzzard.

On several occasions I saw this species during my second visit. It seems to prefer thick groves to the more open country.

11. **Falco peregrinus**, L. Peregrine Falcon.

The Peregrine is not common in Egypt; but I occasionally saw it, sometimes in pairs, sometimes singly. One of our party shot an old female, decidedly the largest example of the species I ever saw.

12. **Falco barbarus**, L. Barbary Falcon.

I saw a specimen of this Falcon at Cairo in January 1864, in the possession of a gentleman who had shot it the day before near Sakkara. I never met with this species in Egypt on any other occasion.

13. Falco sacer, Gmelin. Saker Falcon.

I should say that this very handsome Falcon is rare in Egypt; for, with the exception of a fine female obtained near Girgeh on my first visit, I never saw it either alive or dead; nor did I ever hear of any one else having seen it in Egypt. The legs and feet of the adult are pale yellow, and not blue as they are sometimes represented.

14. Falco lanarius, L. Lanner Falcon.

Decidedly the most abundant of the large Falcons in Egypt, where it breeds and is resident, I believe, all the year round. In the month of January 1864, I shot three specimens within a short walk of Cairo.

15. Falco æsalon, L. Merlin.

Common up to the end of March, but I do not know whether it remains to breed. I noticed the same numerical preponderance of male birds as on my first visit, but I did shoot one very fine adult female.

16. Tinnunculus alaudarius, G. R. Gray. Kestrel.

Swarms all over the country. I sometimes shot one in hopes it might be the Lesser Kestrel, which it never was.

17. Tinnunculus cenchris (Frisch). Lesser Kestrel.

With the exception of one male, killed about the end of March, I never saw this species in Egypt; but I believe it arrives in great numbers later in the spring, and breeds in the country.

18. Accipiter nisus (L.). Sparrow-Hawk.

In Egypt, where this bird is not persecuted as it is in England, it is comparatively tame and familiar; and I have often seen it in the city of Cairo, flying about, and perching on the house-tops on the look-out for Sparrows or any other small birds that might come within its reach. It is abundant all the way from Cairo to Assouan, especially frequenting thick groves of acacia. Although generally in pairs, I did not succeed in finding a nest up to the end of March. I shot some old females of unusually large size; two that I skinned measured fully sixteen inches in length each.

19. Elanus cæruleus (Desfontaines). Black-winged Kite.

Very abundant all the way from Cairo to Assouan, and extremely tame and easy to shoot. Although the birds were paired all through the month of March, I am sorry to say that I did not succeed in finding a nest. I suspect that this species is rather a late breeder. I think that its food consists principally of lizards, small mammals, insects, and occasionally small birds.

20. Milvus ægyptius (Gmelin). Egyptian Kite.

I certainly cannot agree with Dr. Adams, or Mr. S. Allen (Ibis, 1864, pp. 9 and 234) as to the relative abundance of this species and *M. migrans* in Egypt; for I can most positively assert that I have never once seen an adult individual of the latter in that country. I have often shot Kites in the immediate neighbourhood of Cairo, and they have always proved, if adult, to be *M. ægyptius*; as to immature individuals, I can never feel certain to which species they may belong. Our party on the Nile shot a vast number of Kites, all along the Nile valley from Cairo to Assouan, without once procuring an adult specimen of *M. migrans*. I admit that we sometimes shot young Kites that differed from the usual immature plumage of *M. ægyptius* in being blacker, spotted, and mottled with white, like an immature *Aquila nævia*. These *may* have been immature individuals of *M. migrans*; but an adult of that species I never once saw in Egypt. I may mention that there are now in the Gardens of the Zoological Society of London three Kites that were taken from the nest by one of our party, and reared on board our boat; these birds, which to the best of my recollection were from different nests, have all three turned out to be *M. ægyptius*. These birds were breeding in great numbers in February and March; I took a great many eggs, of which several were quite white, without any spots. In one nest I found the dried-up carcasses of two rats, which formed part of its lining. These Kites feed freely on carrion; but I never saw them attempt to take young Pigeons or Chickens, or any other living prey.

21. Circus æruginosus (L.). Marsh-Harrier.

Egypt is a fine country for Harriers, and I have obtained there all four of the European species, of which this is much the most common, and is extremely abundant all along the Nile valley. We killed examples in all stages of plumage, including several with the wings and tail quite pale grey. This species is much less addicted to perching on trees than the two following ones. I believe it is generally known that it breeds in the dark brown stage of plumage.

22. Circus cyaneus (L.). Hen-Harrier.

Not by any means a common species. Near Manfaloot I found a large orange-grove surrounded by a thick band of gum-acacia trees, which seemed a regular colony of Harriers; for one of our party and myself shot there, in little more than an hour, a male and two females of this species, and a male and three females of *Circus swainsoni*, all adults. This was in the month of March.

23. Circus swainsoni, A. Smith. Pale Harrier.

Decidedly more common than *C. cyaneus*, and much given to perching on low thick trees. The females of these two species are not very easy to distinguish, unless shot in company with the males.

24. Circus cineraceus (Montagu). Montagu's Harrier.

I must confess that I never saw an adult male of this species in Egypt; but we shot a few immature specimens, which, from their small size and the uniform colouring of their under parts, I can refer to no other species.

25. Bubo ascalaphus, Savigny. Egyptian Eagle-Owl.

We shot a specimen of this fine bird in February on our way up the Nile. I afterwards saw one near the Pyramids of Ghizeh early in April, but did not succeed in shooting it. On the same day I got two eggs of this species from an Arab who had taken them a few days previously in the Pyramid of Aboroash, about five miles north of Ghizeh; he had caught the old bird on the nest, and I saw its mangled remains.

26. Asio otus (L.). Long-eared Owl.

We shot two or three pairs of this Owl. They were always found sitting close together, in the thickest part of a dense grove of gum-acacia trees.

27. Asio brachyotus (L.). Short-eared Owl.

One specimen of this widely distributed species was shot in March, on our way down the Nile.

28. Strix flammea, L. Barn-Owl.

Occasionally seen among the ruined temples, and sometimes shot. I found a nest of this Owl, containing one egg, in one of the Pyramids of Ghizeh.

29. Athene persica (Vieillot). Southern Little Owl.

Very abundant, and equally at home in town and country. Breeds in March. Flies freely and well in broad day-light. Differs very little from the *A. noctua* of Europe.

30. Jynx torquilla, L. Wryneck.

Near Thebes, one day in the month of March, I saw a small bird climbing over some rocks. I shot it, and it turned out to be a Wryneck. A month later I shot another near Damietta.

31. Cuculus canorus, L. Common Cuckoo.

One specimen was shot towards the end of March, not far from Cairo. Not seen on any other occasion.

32. Oxylophus glandarius (L.). Great Spotted Cuckoo.

Very abundant, and resident through the winter. Lays its eggs in the nests of *Corvus cornix*. The first eggs of this bird that I found, I took on February 26th, from a nest that contained two eggs of the Cuckoo, and five of its rightful proprietor, the Crow. The eggs of this Cuckoo that I took in Egypt are rather smaller than those taken in Spain by Lord Lilford. I believe that in Egypt it never lays its eggs in the nest of any other bird than *Corvus cornix*.

33. Centropus ægyptius (Gmelin). Egyptian Coucal.

On my first visit to Egypt I shot a specimen of this bird, near Atfeh, the place where the Mahmoudieh canal joins the Nile. I have the specimen still in my possession, but I believe Egyptian examples are scarce in collections.

34. Merops viridis, L. Green Bee-eater.

Very abundant, and resident throughout the winter, which the two other species of Bee-eaters are not. I do not know when this bird begins to lay; it had not done so by the beginning of April.

35. Merops persicus, Pallas. Blue-cheeked Bee-eater.

I shot a pair of these birds at Benisouef, on March 26th, which was the first time I saw the species. From that time they became plentiful. I found them tame, and much given to perching on telegraph-wires.

36. Merops apiaster, L. European Bee-eater.

I did not see this species until April; so I conclude it arrived later than *M. persicus*. I found it less abundant than that species, and much wilder and less easy to shoot.

37. Alcedo ispida, L. Kingfisher.

By no means a common bird. I saw it more frequently near Cairo than anywhere else.

38. Ceryle rudis (L.). Black-and-white Kingfisher.

Very abundant. I found it breeding in April, but saw no signs of its doing so even in February, though Dr. Adams says that "it breeds early in December" (Ibis, 1864, p. 15). I agree with that gentleman that the male has a double band of black across the breast, the female a single one.

39. Upupa epops, L. Hoopoe.

Very common throughout the winter. Breeds in March, when we procured both eggs and young in Upper Egypt.

40. Caprimulgus isabellinus, Temminck. Cream-colonred Nightjar.

Specimens procured on my first visit.

41. Cypselus apus (L.). Common Swift.

Resident through the winter, and abundant in Upper Egypt. The Swifts in Egypt differ in colour from any that I have seen in Europe; they are much paler, and more grey than black; still I believe they are not considered specifically distinct.

42. Hirundo riocourii, Audouin; *H. cahirica*, Licht. Cairene Swallow.

Resident throughout the winter, and very abundant from Cairo to Keneh, above which it is less numerous. I fully agree with Mr. S. Allen (Ibis, 1864, p. 237), that the fact of its being resident throughout the winter, while *H. rustica* only arrives in the spring, is a strong argument in favour of their being specifically distinct; besides which, the colour of the belly is so different in the two birds (that of *H. cahirica* being deep chestnut) that I really cannot entertain the smallest doubt that the subject of the present note is a good species.

43. Hirundo rustica, L. Common Swallow.

Began to appear about March 25th, and was common at Cairo and Damietta in April.

44. Cotyle rupestris (Scopoli). Crag-Martin.

Abundant in all rocky parts of Egypt. I saw several nests and procured some eggs in March; both nest and eggs much resemble those of *Hirundo rustica.* This species is resident throughout the winter.

45. Cotyle riparia (L.). Sand-Martin.

Large flocks of this species arrived in Upper Egypt early in March, and immediately set to work to make holes in the sandy banks of the Nile. I never saw *Hirundo rufula* in Egypt, but I found it pretty common near Smyrna in April.

46. Muscicapa collaris, Bechstein. Collared Fly-catcher.

Common at Damietta in April, when it had probably just arrived.

47. Lanius dealbatus, De Filippi (Rev. Zool. 1853, p. 289). Bleached Shrike.

Procured in Upper Egypt in the winter, where, however, it is not common. I never heard of its occurrence in the Delta. It hardly differs from *L. excubitor*, but has the grey of the upper parts rather paler in tint, and the white of the under parts purer. It is a remarkable fact in the distribution of these Shrikes, that in the north and centre of Europe there is a light-coloured species (*L. excubitor*), in the south of Europe and North Africa, a dark-coloured species (*L. meridionalis*), while the present form is found in the Sahara, and Upper Egypt, to the south of the regions inhabited by *L. meridionalis.*

48. Lanius auriculatus, P. L. S. Müller; *L. rufus*, Temm. Woodchat.

Occasionally shot in March, but not common.

49. Lanius nubicus, Lichtenstein; *L. personatus*, Temm. Masked Shrike.

I first saw this species in Upper Egypt about the end of February, when it had probably just arrived. It afterward became very abundant, and was generally in pairs, but I do not think it had begun to breed by the end of March. The species is accurately figured by Dr. Bree (Birds of Europe, i. p. 161).

At Smyrna and Constantinople, whither I went on leaving Egypt, I found none of the three above-named Shrikes, but *Lanius minor* and *L. collurio* instead.

50. Turdus musicus, L. Song-Thrush.

Shot two or three times in February.

51. Petrocincla cyana (L.). Blue Rock-Thrush.

Tolerably common all through the winter, especially frequenting rocks and ruins.

52. Petrocincla saxatilis (L.). Rock-Thrush.

I suspect that this species is a spring visitant; for I did not meet with it till about the middle of March, when I saw a fine male in the temple of Karnak. I afterwards found it common at Damietta in the month of April.

53. Saxicola leucocephala (A. E. Brehm). Whiteheaded Chat.

Egypt is a fine country for Chats; and while there I devoted a good deal of attention to that family of birds, and obtained a good many species. I must say that I see no good reason for separating the genus *Dromolæa* from the old-established one of *Saxicola*. I think it impossible to fix on a line of demarcation as to what constitutes a *Dromolæa**. Is it an absence of sexual difference? If so, *Dromolæa monacha* should be excluded from that genus, and *Saxicola lugens* and *Saxicola isabellina* should be admitted into it. Is it a well-contrasted plumage of black

* [The characters of *Dromolæa*, as given by Dr. Cabanis (Mus. Hein. i. p. 9, note) are structural.—Ed.]

and white? If so, *Saxicola lugens* may claim to be a *Dromolæa*. Is it superiority in size? If so, then may *Saxicola isabellina*, which is fully as large as any of the family. I therefore prefer to retain the old genus *Saxicola* for all the true Chats. The beautiful Whiteheaded Chat is found all over Egypt, wherever the rocks, in which it delights, are to be found. I shot a pair in the desert about a mile south of Cairo, in the month of January. It is particularly abundant among the granite rocks about Assouan and the First Cataract, and is always to be seen among rocks in the desert, and never on cultivated land. The plumage of this species is of the most beautiful jet-black, and not brownish-black like *Saxicola leucura*, Gm., which I never saw in Egypt. I consider the white crown to be a mark of advanced age.

54. SAXICOLA LEUCOPYGIA (A. E. Brehm). White-rumped Chat.

I am decidedly of opinion that this is no good species at all*, but merely the preceding one at a less advanced age. The following are my reasons:—With the exception of the colour of the crown of the head, there is absolutely no difference whatever between the birds. The white-headed birds have often a few black feathers interspersed among the white feathers of the crown. The black-headed birds have *generally* a few white feathers similarly interspersed. And, more than all, I have sometimes seen a white-headed bird and a black-headed bird paired together. I believe that the white head is not acquired till an advanced age, and that the bird breeds before it does acquire it. Sex has nothing to do with the colour of the head.

55. SAXICOLA MONACHA, Rüppell.

A rare species in Egypt. I possess two specimens, male and female, procured there in January. It is the female of this species that is figured by Rüppell (*Atl.* tab. 34, fig. *a*) as *Saxicola pallida*. No wonder, then, that Dr. Adams's specimens (Ibis, 1864, p. 19) of *Saxicola pallida* were both females! It would be rather difficult to find a male *S. pallida*. I may state that Dr. Sclater fully agrees with me in what I have stated about the subject of Rüppell's plate.

* [*Cf.* Tristram in P. Z. S. 1864, p. 441.—ED.]

56. Saxicola lugens, Lichtenstein. Mourning Chat.

This is the most abundant of all the Chats near Cairo in the winter; I procured several there in January, quite close to the city. It becomes less numerous south of Siout. This species affects rocks and deserts, avoiding cultivation. There is no difference in plumage between the sexes, and they are nearly always seen in pairs.

57. Saxicola isabellina, Rüppell, Atl. t. 34. fig. *b*; *S. saltator*, Ménétr. Ménétriés's Wheatear.

This large, stout species is resident throughout the winter, and abundant all the way from Cairo to near Assouan. It frequents the patches of short burnt-up grass at the edge of the desert. The sexes are alike in plumage. This species is figured by Dr. Bree (Birds of Europe, ii. p. 136).

58. Saxicola homochroa, Tristram, Ibis, 1859, p. 59.

In the month of January I came upon a pair of these small Chats in the desert near Cairo, and shot one of them. I never saw the species on any other occasion; so I suppose it is rare. It is very like *S. isabellina* in miniature.

59. Saxicola deserti, Rüppell. Desert-Chat.

Resident through the winter, frequenting the edge of the desert, like *S. isabellina*. Less common near Cairo than further south. The sexes are alike in plumage, which in distribution of colour reminds one of *S. stapazina*. The black feathers of the throat are tipped with grey in the beginning of February, but not at the end of March.

60. Saxicola, *sp. indet.*

Among a small collection of bird-skins, on board a boat that I visited on the Nile in March, I saw a Chat that at once struck me as new. A few days afterwards I shot an immature example of evidently the same species, which I am convinced is new to science. As I have only an immature specimen I refrain from attempting a diagnosis. The species very closely resembles *S. philothamna*, Tristram (Ibis, 1859, pp. 58 and 299, pl. ix.), but differs from it in having the tail-feathers *white*, broadly tipped with black, the rump and crissum bright chestnut-red. I should suggest that *S. erythropygia* would be a good name for the bird *.

61. Saxicola œnanthe (L.). Common Wheatear.

First seen near Thebes in the month of March. Egyptian specimens are rather brighter in colour than is usual in Europe. This and the two following species are spring visitants to Egypt.

62. Saxicola xanthomelæna, Hemprich and Ehrenberg.

This species, which may perhaps be considered a local variety of *S. stapazina*, L., differs from that bird in the black of the throat extending much further on the breast (in which respect it resembles *S. eurymelæna*, Hempr. & Ehr., of Syria). The head and back are also less rufous, and much paler in colour than in specimens of *S. stapazina* from Europe. This Chat arrives in Upper Egypt about the beginning of March, and is common at Thebes, and indeed all through the country. It is more given to perch on shrubs and low trees than are the other Chats.

63. Saxicola albicollis, Vieillot; *S. aurita*, Temm. Eared Chat.

Arrives at the same time as the last species, but is rather less abundant. Specimens from Egypt are paler in colour than those from Europe, and are no doubt the *S. aurita*, var. *libyca*, Hempr. & Ehr.

64. Pratincola rubicola (L.). Stone-Chat.

Resident throughout the winter, and common in the neighbourhood of Cairo and elsewhere.

65. Pratincola rubetra (L.). Whin-Chat.

Seen near Damietta in April.

66. Ruticilla tithys (Scopoli). Black Redstart.

Resident in small numbers throughout the winter; frequents ruined buildings.

67. Ruticilla phœnicura (L.). Common Redstart.

Arrives in March; seen but seldom.

---

* [We have not seen Mr. Taylor's specimen; but from the above statement it seems not impossible that it may be the *Dromolæa chrysopygia* of De Filippi (Viagg. Pers. p. 347); but *cf. infra* p. 93.—Ed.]

68. Cyanecula suecica (L.). Bluethroat.

The Egyptian race is that with the breast-spot *red,* as in the Scandinavian form, the type of Linnæus's *Motacilla suecica.* Common about Cairo in January.

69. Erythacus rubecula (L.). Red-breast.

Occasionally seen, and once shot near Cairo in January.

70. Philomela luscinia (L.). Nightingale.

Occasionally shot, but by no means common.

71. Aedon galactodes (Temminck). Rufous Warbler.

This bird is not by any means a "Sedge-Warbler" in its habits, as it principally frequents thickets of low brush-wood near the edge of the desert. In such localities I found it abundant near the end of March.

72. Sylvia cinerea, Latham. Common Whitethroat.

73. Sylvia curruca (Gmelin). Lesser Whitethroat.

Both these species were occasionally shot on the Nile in March.

74. Sylvia capistrata, Rüppell. Rüppell's Warbler.*

Not at all uncommon in Upper Egypt, among low bushes in the month of March.

75. Pyrophthalma melanocephala (Gmelin). Sardinian Warbler.

Perhaps the most abundant of the Warblers in March. This species, as it creeps among thick herbage and low bushes, always reminds me very much of a Marsh Titmouse (*Parus palustris*). The naked skin round the eye is bright red.

76. Phyllopneuste trochilus (L.). Willow-Wren.

77. Phyllopneuste rufa (Latham). Chiff-Chaff.

Both these species were constantly seen throughout the winter.

---

* [The style of coloration in this species, taken together with the very remarkable appearance of its egg, a characteristic among the *Sylviidæ* of some weight, would almost seem to justify its separation from the group of Warblers in which it is usually placed. But this does not seem to have been done hitherto.—Ed.]

78. Phyllopneuste sylvicola (Latham). Wood-Wren.

Seen at Damietta in April.

79. Pseudoluscinia luscinioides (Savi). Savi's Warbler.

Not uncommon among reeds and other aquatic plants.

80. Calamodyta stentoria (Hempr. et Ehr.); Ibis, 1864, pl. i.

I found this rare bird near Damietta early in April, in the same lake where it had previously been discovered by Mr. S. Allen. Although it was abundant there, I only got two specimens.

81. Cisticola schœnicola, Bonaparte. Fantail Warbler.

This, the smallest of Egyptian birds, is abundant, and generally to be seen flying, with a peculiarly jerking flight, over wheat-fields, incessantly uttering a sharp cry, remarkably loud for the size of the bird.

82. Suya gracilis (Rüppell), Atl. t. 2. fig. *b*.

This pretty little bird is resident through the winter, and common throughout Egypt, wherever there are bushes. I found it abundant near Cairo in January.

83. Motacilla alba, L. White Wagtail.

Perhaps the commonest bird in the country, and the only small bird I saw at Suez.

84. Motacilla lugubris, Temminck; Gould, B. Eur. ii. pl. 142. "*M. vidua* Sund.," Tristram, Ibis, 1866, p. 291.

I saw two or three pairs of this very distinct and well-marked species on the banks of the Nile, at Assouan, but did not observe it elsewhere.

85. Motacilla sulphurea, Bechstein. Grey Wagtail.

Seen at Cairo in January.

86. Budytes flavus (L.), var. *cinereo-capillus*, Savi. Grey-headed Wagtail.

Abundant all along the Nile in February and March.

87. Anthus rufogularis, Brehm. Red-throated Pipit.

Common in suitable localities from December to April. I never saw the common Meadow-Pipit (*Anthus pratensis*).

88. Anthus arboreus, Bechstein. Tree-Pipit.

One specimen shot.

89. Anthus campestris, Bechstein. Tawny Pipit.

Appeared in Upper Egypt in March, and at once became abundant.

90. Certhilauda desertorum (Stanley). Bifasciated Lark.

Occasionally procured near the edge of the desert.

91. Galerita cristata (L.). Crested Lark.

Extremely abundant. Eggs procured in Upper Egypt early in March, are smaller than those of the common Sky-Lark (*Alauda arvensis*), though the bird is larger.

92. Calandrella brachydactyla, Leisler. Short-toed Lark.

Not seen before March; so I suspect it is a spring-visitant. Generally in small flocks.

93. Calandrella reboudia, Tristram, Ibis, 1859, p. 58. Reboud's Lark.

A small *desert*-form of the preceding species, from which it differs in being resident through the winter. I procured specimens near Cairo, in the month of January, out of a small flock that I found in the desert.

94. Ammomanes isabellina (Temminck). Desert-Lark.

I found this beautiful Sand-Lark abundant near Cairo in the month of January. I have shot it close to the walls of the city. Near Assouan it seems to be replaced by the following species.

95. Ammomanes fraterculus, Tristram, P. Z. S., 1864, p. 434. Tristram's Lark.

Seen only in the neighbourhood of Assouan, where it was common, and in pairs at the beginning of March.

96. Emberiza hortulana, L. Ortolan.

I shot an individual of this species near Benisouef late in March. This was the only time that I ever saw any species of the genus in Egypt.

97. Passer domesticus (L.). Common Sparrow.

In my former list of Egyptian birds (Ibis, 1859, p. 48), I included *Passer cisalpinus* by mistake for this species. I have now great pleasure in correcting that error. *P. domesticus* is very abundant all along the Nile valley, and is the only Sparrow that I have seen in the city of Cairo, where it swarms, and is remarkably tame and pert. In the month of March I noticed it breeding in Upper Egypt in holes in the mud-banks of the Nile.

98. Passer salicicola, Vieillot. Spanish Sparrow.

More abundant even than the last species, and usually in larger flocks. I consider "Spanish" a very bad epithet for this species; for I never once saw it during a three months' tour in Spain, where *P. domesticus* was the only Sparrow I found. In Algeria and Tunis this is the Sparrow of the country; and indeed I saw no other there. All over Italy and Sicily *P. cisalpinus* is certainly the most common, and, indeed, the only species I ever saw; nor did I ever meet with *P. cisalpinus* except in those countries. In the South of France, Spain, Smyrna, and Constantinople, *P. domesticus* is the Sparrow of the country. In these remarks on Sparrows I do not include *Passer montanus* or *Petronia stulta,* which are not representative species.

99. Linota cannabina (L.). Common Linnet.

Abundant about Cairo in January.

100. Erythrospiza githaginea, Lichtenstein. Desert-Bullfinch.

I never saw this pretty bird near Cairo; but it is very common in Upper Egypt, where it is generally to be seen in small flocks towards the edge of the desert. The species is satisfactorily figured by Dr. Bree (B. Eur. iii. p. 81).

101. Sturnus vulgaris, L. Common Starling.

Occasionally seen, and sometimes shot.

102. Corvus frugilegus, L. Rook.

I saw a small flock of Rooks, about twenty in number, in a grove of Palm trees (*Phœnix dactylifera*) near Ghizeh, January 29th, 1864. I never saw the Rook in Egypt on any other occasion.

103. Corvus cornix, L. Hooded Crow.

Very abundant wherever there are trees, and consequently not at Suez, where there are none. Breeds in February and March. When I was trying to stalk a *Buteo ferox,* or any other large raptorial bird, these Crows seemed to take a pleasure in attacking and driving it away just before I got within shot. Indeed they persecute and bully all the large birds in the country, except *Corvus umbrinus,* of which they are afraid. I never saw the Black Crow (*Corvus corone*) in Egypt.

104. Corvus umbrinus, Hedenborg. Brown-necked Raven.

This species is intermediate in size between *C. corax* and *C. corone*; but the feathers of the throat are lanceolate, and it is in all respects a true Raven. It is tolerably common throughout Egypt, and is one of the few birds I found at that desolate spot Suez. We did not happen to shoot a Raven on my first visit, and I was then unacquainted with *C. umbrinus*; so that in my former list (Ibis, 1859, p. 49) I included *C. corax,* which I believe is never found in Egypt. Dr. Adams also falls into the same error (Ibis, 1864, p. 22), as subsequently noticed by Mr. Allen (p. 239). This bird makes its nest sometimes in rocks, sometimes in the centre of the crown of a Date-Palm (*Phœnix dactylifera*), in which position I found a nest early in March, near Assouan, containing four eggs. I took another nest of this species, with five eggs, from one of the pyramids of Ghizeh in April. The eggs are larger than those of *C. cornix,* and more brightly coloured. I once saw a flock of at least a dozen of these Ravens near the pyramids of Dashoor.

105. Columba schimperi, Bonaparte. Schimper's Pigeon.

Flocks of Pigeons, perfectly wild, frequent the precipitous rocks that here and there border the Nile. I have frequently shot examples from them, and have always found them to possess the characteristics of *Columba schimperi,* being decidedly and conspicuously distinguishable from *C. livia* by the absence of the white rump which forms so marked a feature in that species. The Pigeons which, in a semidomesticated state, frequent the Arab towns and villages, evidently claim descent from *C. schimperi,* and not from *C. livia,* as they too are without the white rump. Indeed I never in Egypt saw a single instance of a Pigeon possessing the white rump characteristic of *C. livia.* I have seen these pigeons perching in numbers on the horizontal fronds of the Date-Palm, but never on any other tree. During my last visit I again noticed their habit of settling on the river, and remaining on the water for a considerable time in the position of swimming.

106. TURTUR AURITUS, G. R. Gray. Turtle-Dove.

Not found in Egypt in the winter. First seen at Assouan in the beginning of March; after that, common in Upper Egypt.

107. TURTUR SENEGALENSIS (L.). Egyptian Turtle-Dove.

Abundant all through the country, and resident through the winter. It breeds in March; the eggs are very small in proportion to the size of the bird; the nest slight and fragile, usually placed in the thickest part of a Gum-acacia tree. I never saw *Turtur risorius* in Egypt, though it is abundant at Smyrna.

108. PTEROCLES EXUSTUS, Temminck. Singed Sand-Grouse.

By far the most abundant species of Sand-Grouse in Egypt.

109. PTEROCLES SENEGALENSIS, Latham.

Much less common than *P. exustus.* Both these species are well figured in Mr. Gould's 'Birds of Asia.' I never saw *P. coronatus* in Egypt, and I believe that neither *P. arenarius* nor *P. alchata* ever occur there.

110. AMMOPERDIX HEYI. Hey's Sand-Partridge.

One of my companions started a pair of these birds from among some rocks near Assouan and shot the male. I never saw the species on any other occasion.

111. COTURNIX COMMUNIS, Bonnaterre. Common Quail.

Common in wheat-fields in February and March.

112. CURSORIUS GALLICUS, Gmelin. Cream-coloured Courser.

Occasionally seen in the desert in small flocks, and once shot.

113. ŒDICNEMUS CREPITANS, Temminck. Common Thick-knee.

Tolerably abundant, and very good to eat.

114. Charadrius pluvialis, L. Golden Plover.

Once seen in the market of Alexandria.

115. Ægialitis cantianus (Latham). Kentish Plover.

Abundant in the winter, near Cairo, in muddy places.

116. Ægialitis fluviatilis (Bechstein). Little Ringed Plover.

Common all through the country, and frequently seen in the Desert, far away from the river, running swiftly along the sand.

117. Ægialitis pecuarius (Temminck), Pl. Col. 183; Schl. Mus. P.-B., *Cursores*, p. 34.

I once came upon a flock of this rare Plover on the bank of the Nile, near Girgeh, and shot several of them.

118. Pluvianus ægyptius (L.). Black-headed Plover.

This very beautiful bird is abundant all along the Nile above Cairo, wherever the banks of the river are muddy; it avoids rocky ground, and is therefore not so plentiful near Assouan. It was generally in pairs during the month of March; but I know nothing of its nidification. I see no reason to alter my previously expressed opinion (Ibis, 1859, p. 52) that this bird is probably the *Trochilos* of Herodotus. It has, I think, a better claim to that honour than the Spur-winged Plover (*Hoplopterus spinosus*), because it frequents the same localities as the Crocodiles, namely, mud and sand-bands in the middle of the river; whereas the Spur-wing is more generally met with high and dry in the fields, in which it would not be likely to meet with many Crocodiles.

119. Hoplopterus spinosus (L.). Spur-winged Plover.

Very common, tame, and noisy.

120. Vanellus cristatus (Meyer). Lapwing.

Not unfrequent in small flocks.

121. Chætusia gregaria (Pallas). Social Plover.

A rare species in Egypt. I once saw several in a field near Girgeh, and shot an immature specimen. Figured by Bonaparte (Icon. Faun. Ital.), and also by Dr. Bree (B. Eur. iii. p. 20).

122. Chætusia leucura, Lichtenstein. White-tailed Plover.

On my second trip to Egypt I revisited, in the month of March, the same marsh near Thebes where I had previously obtained this rare bird in the month of January; but I was too late; for the marsh was dried up, and the Plovers were gone. In the following winter, a friend of mine visited the same marsh in January, and obtained at least a dozen specimens, all of which I have seen. I never knew of this species being found in Egypt, except in this one marsh between Thebes and Erment. The bird is very well figured in 'The Ibis' for 1865 (pl. x.); but all the specimens that I have seen from Egypt have the tail-feathers entirely white, and not banded with brown as in that plate. This may be a mark of immaturity. Irides *red.*

123. Hæmatopus ostralegus, L. Oyster-catcher.

Seen on the shore of the Red Sea near Suez.

124. Himantopus candidus, Bonnaterre. Black-winged Stilt.

Frequently seen, and occasionally shot.

125. Totanus glottis (L.). Greenshank.

Occasionally shot.

126. Totanus stagnatilis, Bechstein. Marsh Sandpiper.

Rather a rare species. Once shot on my first visit, and occasionally seen on my second. In appearance it much resembles the Greenshank in miniature.

127. Totanus ochropus (L.). Green Sandpiper.

Very common in all suitable localities.

128. Totanus glareola (L.). Wood Sandpiper.

Rare. One specimen procured.

129. Tringoides hypoleucus (L.). Common Sandpiper.

Tolerably abundant, but less so than *T. ochropus.*

130. Tringa minuta, Leisler. Little Stint.

Occasionally occurs in small flocks.

131. Tringa temmincki, Leisler. Temminck's Stint.

A few specimens procured.

132. Gallinago scolopacinus, Bonaparte. Common Snipe.
Abundant in the winter, but becomes scarce in March.

133. Gallinago gallinula (L.). Jack Snipe.
Almost as common as the preceding species.

134. Rhynchæa bengalensis (Gmelin). Painted Snipe.
I did not see this species alive on my second visit, but I saw two or three specimens in a small collection of bird-skins on board a boat I visited.

135. Numenius arcuata (L.). Curlew.
Not uncommon in the winter.

136. Grus cinerea, Bechstein. Common Crane.
Not uncommon; but shy, and difficult to shoot.

137. Ciconia alba, Bechstein. White Stork.
I do not know whether this bird breeds in Egypt; but at all events it remains there till the end of March.

138. Ciconia nigra (L.). Black Stork.
Occasionally seen in the winter.

139. Ardea cinerea, L. Common Heron.
Common, and generally distributed.

140. Ardea purpurea, L. Purple Heron.
Seen on several occasions.

141. Egretta garzetta (L.). Little Egret.
One specimen was shot by our party, but the species is decidedly rare.

142. Buphus coromanda (Boddaert). Buff-backed Heron.
These birds began to assume the elongated buff plumes on the back towards the end of March, about which time, I suppose, they begin to breed.

143. Nycticorax griseus (L.). Night-Heron.
Occurs occasionally in small flocks, and perches much on trees, especially on Palm-trees.

144. Platalea leucorodia, L. Common Spoonbill.
Not uncommon in the winter, in flocks.

145. Phœnicopterus roseus, Pallas. Flamingo.
I often saw large flocks of Flamingos in Egypt, but never

succeeded in shooting any. On the lake of Tunis they are more abundant, and less wild than in Egypt.

146. Fulica atra, L. Common Coot.

One individual was shot near Assouan.

147. Anser albifrons (Gmelin). White-fronted Goose.

Abundant on the Nile, in large flocks.

148. Chenalopex ægyptiacus (L.). Egyptian Goose.

In the month of March these Geese were generally in pairs. They are abundant, but rather wild.

149. Tadorna rutila (Pallas). Ruddy Shelldrake.

One individual of this species was shot by our party on my first visit, but I never met with it on my second.

150. Spatula clypeata (L.). Shoveller Duck.

151. Anas boschas L. Wild Duck.

152. Anas strepera, L. Gadwall.

153. Anas acuta, L. Pintail.

154. Anas crecca, L. Teal.

155. Fuligula ferina (L.). Pochard.

These six species of Duck are all more or less abundant on the Nile, in flocks; and we shot some of each, in one or the other of my voyages up the river. I should say that *Fuligula ferina* is the most abundant, and *Anas strepera* the most rare.

156. Podiceps, sp. indet.

I once saw a Grebe swimming in the Nile close to our boat; from its size I should say it was *P. cristatus*.

157. Phalacrocorax carbo (L.). Common Cormorant.

Cormorants are abundant wherever the Nile is overhung by abrupt cliffs, in which they roost, and, I suspect, breed.

158. Pelecanus onocrotalus, L. Pelican.

I found Pelicans much less plentiful on my second voyage up the Nile than on my first. This may have been owing either to the ten years' persecution they had in the meantime undergone, or to the fact that the second voyage was two months later in the season than the first.

159. Larus fuscescens, Lichtenstein.

I have seen this Gull flying about the harbour of Alexandria. It is apparently intermediate between *Larus fuscus*, and *Larus argentatus*, as it resembles the former in having the legs and feet yellow, while the grey of the mantle is not much darker than in *L. argentatus*. It is the common Gull of the Bosphorus. There is a Gull of this species now alive in the Gardens of the London Zoological Society; until lately it was named *Larus michahellesi*; the label is now altered correctly.

160. Larus audouini, Payraudeau. Audouin's Gull.

To the best of my belief, I saw this Gull during my first voyage up the Nile.

161. Gelastes tenuirostris (Temminck). Slender-billed Gull.

A specimen of this Gull was shot by one of our party out of a small flock, near Keneh in Upper Egypt. This species differs from the other small Gulls with red bills and legs in never, at any time of the year, assuming a black head. It is not well-named *Slender-billed Gull*, as its bill is certainly stouter and stronger than that of the common *L. ridibundus*. It is figured by Bonaparte (Icon. Faun. Ital.), also by Dr. Bree (B. Eur. iv. p. 98).

162. Chroicocephalus ridibundus (L.). Black-headed Gull.

The most common species of Gull on the Nile in March.

163. Chroicocephalus melanocephalus, Natterer. Natterer's Gull.

I saw this Gull flying about the harbour of Alexandria in April. It is easily distinguished, even on the wing, from *C. ridibundus*, by its deep black head and its pure white wings untipped with black.

164. Sterna caspia, Pallas. Caspian Tern.

I saw several of these fine Terns flying over a lake near Damietta.

165. Sterna velox, Rüppell. Swift Tern.

I bought some Tern's eggs at Damietta, that had been taken near that town: these have every appearance of belonging to this species; they are decidedly larger than the eggs of *S. cantiaca*.

166. **Sterna cantiaca**, Gmelin. Sandwich Tern.
Seen near Damietta.

167. **Sterna anglica**, Montagu. Gull-billed Tern.
The most common species of Tern in the interior of Egypt, frequenting marshy places.

168. **Hydrochelidon fissipes** (L.). Black Tern.
Seen near Damietta in April.

III.—*On the Ornithology of Palestine.* Part V.

By the Rev. H. B. Tristram, M.A., F.L.S., C.M.Z.S.

(Plate I.)

[Continued from 'The Ibis' for 1866, page 292.]

No families of birds are more largely represented in Palestine than the Warblers, the *Sylviinæ* and *Lusciniinæ*, including especially the *Saxicolinæ*, almost as varied and as perplexing as the Larks. If we cast our eye down the catalogue, we find sixty-one species of the Sylviads enumerated,—a list which we can hardly believe to be nearly complete; for the occurrence of many of the species we met with is a pretty sure indication of the presence, occasional at least, of many others. It cannot be assumed that *Luscinia philomela*, for instance, will not be found, or that *Salicaria aquatica*, *Locustella nævia*, and other species of wide range are not represented. I do not know of a more admirable post of observation for the British ornithologist who wishes to study the habits of the Warblers in our lists, actual or reputed, than the Holy Land. He will have the double advantage of familiar association during the winter months with nearly all our summer migrants; while in spring he may watch from day to day the nidification of all those species which either an erratic spirit of ornithic adventure, or the ingenuity of dealers have added to our array of occasional visitants.

There are two very distinct tides of Sylviad immigration in Palestine. In October and November thousands of the hardier species pour down into the lowlands and wadys, where they remain till February or March. Then for a month the land is left almost deserted, till in April and May the spring arrivals commence, and every thicket is tenanted by species either strange to our shores or known only by the occasional capture of a straggler. Such are *S. orphea, Aedon galactodes, Hypolais elaica,* and *H. upcheri.* We were especially fortunate in our opportunities of watching the nidification of the less-known species; and I believe there is no class of birds in which the style of architecture, with the coloration and form of the egg, casts more light on the true grouping of species and the arrangement of genera. Possessed of a good series of the eggs of the *Lusciniidæ,* we might classify the species accordingly, and find that we had scarcely in one instance diverged from the recognized order of our best systematists. Thus the unique egg of *Cettia sericea* separates it at once from all our other Palæarctic Warblers, and points out its affinities to the long-tailed *Prinia* group of the Indian region. Then the eggs of Savi's and the Grasshopper-Warbler group them apart, and link them to the very similar eggs of the Australian *Megalurus* and *Calamanthus. Cisticola* and *Drymœca,* varying as they do, still vary within the same limits as the Oriental *Prinia* and *Orthotomus,* to which we must admit their affinities. The egg of *Aedon* stands out alone, steadily demanding a distinct and isolated position, which all who are familiar with its manners and note will readily grant, but approaching in habit, as in its eggs, the Indian *Thamnobiæ.*

The great group of *Calamoherpe,* from whatever part of the world they come, have but one unmistakeable character of egg, sharply defined from all the other groups. The beautiful and fragile eggs of every member of the genus *Hypolais,* though each distinct in markings and in ground-colour, from the richest salmon hue to pale ashy white, but all of a peculiar rough texture, are a group almost as isolated and peculiar as *Pycnonotus,* with no affinities approaching *Phyllopneuste.* These again, though infinitely varying within themselves, disclaim alliance with any of the other Sylviads. We then have the genus *Sylvia* as restricted by Bonaparte, of which our Whitethroat is the type, with its greenish ground-colour and the spotting different in each species; while *Melizophilus* and *Pyrophthalmus* are evidently aberrant members of the same family. Next we may take the *Curruca* as restricted by Bonaparte, with the eggs always of a whitish or brownish-white ground, and the markings set each in a nimbus of fainter colour, as in our Blackcap and Garden Warblers; while *Nisoria undata,* a good genus, comes next them by its ground-colour, but wants the spots.

The Redbreast, pugnacious as he always is, stands aloof from any entangling alliances, and asserts an independent position as *Erythacus,* which introduces us to Mr. Gray's subfamily of *Lusciniinæ,* comprising all the remaining Sylviads. Here we find a character pervading almost the whole subfamily in the coloration of the eggs, which is never found in the first subfamily *Sylviinæ,* viz. the blue or bluish-white ground-colour. *Copsychus, Myiomela, Saxicola, Ruticilla, Thamnobia,* and all their subdivisions have this common feature. The most aberrant are the genera *Luscinia* and *Cyanecula,* with their uniform olive-green coloration. But, as we well know, the Nightingale's egg is not unfrequently blue, and the identity of the colour in the eggs of the Bluethroats attests their affinity to the Nightingale. All the innumerable species of *Saxicolinæ* lay blue eggs, either plain or spotted; and frequently, as in the *Turdinæ,* we find two closely affined species laying one a plain, the other a spotted egg; while occasionally the eggs of comparatively distant members of the family are identical, as in the case of *Saxicola œnanthe* and *S. isabellina.* Of the five species of the subgenus *Dromolæa,* of which I have taken the eggs, four are of the faintest bluish-white, with ruddy spots, and the fifth a rich blue ground with similar spots. From these we are led on to *Ruticilla,* the eggs of which are never spotted, though the ground-colour varies from pure white in the single instance of *R. tithys* to the most delicate white with the faintest bluish tinge in *R. moussieri,* up to the very dark blue of *R. semirufa,* a bird most closely allied to *R. tithys.* Finally, we have the spotless blue of *Sialia* and *Accentor,* with which last I find much difficulty in grouping Mr. Gray's *Acanthiza,* or the *Siurus* of the New World.

But this digression on eggs in general is scarcely in place among notes on the birds of Palestine. To proceed to the species in detail. Of the *Malurinæ,* so abundantly represented in the Ethiopian and Indian fauna, Palestine possesses but three species, *Drymœca gracilis* (Licht.), already described (Ibis, 1865, p. 82), a second *Drymœca,* and *Cisticola schœnicola,* Bp. I cannot find this second *Drymœca* described by Rüppell or any other author; and as it is very distinct from any other species I have seen, I venture to describe it as new.

DRYMŒCA EREMITA, Tristram.

Suprà fuscescenti-cinerea, pileo, occipite et nuchâ nigro striolatis, superciliis purè albis, lineâ inter rictum et oculum et ab oculo ad aurem nigrâ; remigibus cinereis; caudâ fuscescenti-nigrâ et obsoletè transverse xxv. striis nigris fasciatâ; rectricis extimæ pogonio exteriore et apice albo limbatis: subtùs alba, mento et pectore nigro striatis; hypochondriis et ventre castaneo tinctis; rostro et pedibus pallidè aurantiacis; iridibus pallidè fuscis. Long. tot. 4·45, alæ 2·75, caudæ 2·1, tarsi 0·75, rostri a rictu 0·5.

Hab. in deserto Judaico et Arabiâ Petræâ.

Its nearest congener seems to be *Drymœca striaticeps,* described by me from the Sahara in 'The Ibis' for 1859 (p. 58), from which it may be at once distinguished by the broader dark striæ on the head and neck extending further down, by the distinct white eyebrow, the throat and breast striated with black instead of the dull uniform white of the African bird, and the deeper russet of the flanks. We met with it only in the desolate wadys opening on the west side of the Dead Sea, where it flitted restlessly from one little desert shrub to another, differing in this respect from *D. striaticeps,* which I found in moist oases among tamarisks. In its note and flight it differs much from *D. gracilis,* and is very difficult of approach. We found one or two in each wady, but never two together; and it inhabited ravines where the Rock-Chats were the only other birds that could find sustenance. So wild and wary was it, that the first specimen observed, which we at once recognized as a species new to us, cost Mr. Upcher and myself two hours' pursuit in the Wady Areyeh, and eleven shots, before we secured it. We rarely could get a glimpse of it, as it restlessly flitted about eighty yards ahead, secreting itself in the line of brown bushes which fringed the ravine. We afterwards found it in more exposed situations. The Rev. F. W. Holland has since brought home a specimen from Wady Feiran, near Mount Sinai. Rüppell has named another Arabian species "*D. inquieta,*" an epithet which none can so well deserve as this little solitary hermit. We did not obtain its eggs; but those of *D. striaticeps*, which have not been described, are white, thickly powdered with pink spots. The note of *D. eremita,* by which we were at first attracted to it, and by the sound of which alone we were able to pursue it, has five syllables, much softer and mellifluous than the cheery and almost startling tones of *D. gracilis.* I should mention that all these species of *Drymœca* have the obsolete barring of the tail, so characteristic of *Pseudoluscinia luscinioides* and *P. fluviatilis.*

Cisticola schœnicola, a bird of wide range, extending from North-west Africa to India, China, and Formosa, rejoices in the moist maritime plains of Palestine, where we found it all the year round, starting up from the long grass in front of our horses, jerking up in the air for a few seconds as it rapidly repeated its single note "*pink, pink,*" and then dropping suddenly again, when it was very difficult to put it up a second time. Its nest is a beautiful cabinet edition of the Reed-Warbler's transferred to *terra firma,* and formed of the finest cotton and spiders' webs among grass-stems. In this respect it differs much from the architecture of *Drymœca.*

The localities suitable for the Marsh-Warblers are few and far between in the Holy Land; and consequently, though the number of species is very large, they are for the most part but scantily represented in individuals. Without exception, so far as we could discover, they are all migrants, returning earlier or later in spring. On most of them we had not many opportunities of making observations. *Calamoherpe palustris, Calamodyta melanopogon,* and *Pseudoluscinia luscinioides* we identified but by single specimens, though the latter we often heard. It is not the first time that I have found "heard not seen" to be the motto both of Savi's and Cetti's Warblers. *Pseudoluscinia fluviatilis* was not much more abundant; yet we several times met with a pair evidently engaged in domestic duties, but searched in vain for its nest, one of my special desiderata. *Calamoherpe strepera* and *Calamodyta phragmitis* were very common from the last week in March in every locality where the herbage and moisture gave them the slightest cover. All the species returned about the same time, with the exception of *Calamoherpe arundinacea* and *C. strepera*, which preceded the others by about a fortnight in the beginning of March; and I see, on reference to my note-book, that we obtained a specimen of every Marsh-Warbler on our list between the 28th March and the 4th April. *C. arundinacea* was, next to the Reed- and Sedge-Warblers, the most abundant species; and its harsh dissonant note, or rather screech, which some one has imposed upon Dr. Jerdon by calling a "charming" song (!), might be heard at sunrise from every tuft of tall canebrake. Truly I can wish the flatterer who called its note "charming" no greater punishment than to have to camp, as we had, near a reed-bed when half a dozen of these noisy birds made the moonlight night hideous with their jarring scream. There is one species which we could not obtain, which I saw repeatedly among the papyrus-swamps of the waters of Merom (Lake Huleh), a region which is an impregnable refuge for every sort of marsh- and water-fowl. It looked just like the common *C. arundinacea*, perhaps smaller; but its note, though quite as harsh, was far more powerful than any I had ever heard. At the time I supposed the bird, which it was hopeless to attempt to secure, to be *C. brunnescens* of India; but on reading Mr. Allen's notice of *Acrocephalus stentorius* (Ibis, 1864, p. 97), I have not the smallest doubt of the identity of the Huleh bird with his Damietta specimen. But besides this there are, so far as I can judge, two distinct forms of *C. arundinacea* in Palestine, the one decidedly darker and larger than the other,—the wings being in the one 3·6 inches, in the other 4·1 from the carpal joint, and the tail respectively 3 and 3·75 inches in length. There is also a very slight difference in the relative length of the second and third primaries. But, with a large series before me from every part of the Mediterranean countries north and south, I am unable to discover any difference sufficiently clear on which to found a specific diagnosis, unless it be the disproportionate length of the tail, which does not occur in any of my French, Spanish, Algerian, or Egyptian specimens.

Cetti's Warbler is by no means among the rarest of the Salicarians of the Holy Land. I say Cetti's Warbler generically; for, though I should not wish to be included by critics among the species-manufacturers like Brehm, yet I must claim some distinctness for the Oriental *Cettia*. The plumage is decidedly more chocolate-colour, and the bill both longer and much broader at the base. I can see no difference between Spanish, Algerian, and Italian specimens, which are perfectly identical. The diagnosis of what I will venture to call CETTIA (POTAMODUS) ORIENTALIS is this—

Statura simillima *C. sericeæ,* dorso quoque concolor, sed pectore et ventro olivaceo nec cinereo fuscata: rostrum 0·7 a rictu et 0·2 in latitudine ad basim; quod in *C. sericea* 0·5 a rictu, et 0·15 in latitudine ad basim.

The olive hue of the white of the lower parts at once distinguishes it. It is a very late arrival from the south: at least it was not till May that we heard its unmistakeable note; for it was rarely to be seen, and possibly might have been skulking in silence before the nuptial season evoked its song. It seems to prefer the margins of very narrow streams and ditches, so long as they are well fringed with thicket, to larger pieces of swamp; and most tantalizing was it time after time to hear the sudden burst of a resounding song like the first part of a Nightingale's suddenly cut short, from the centre of some impenetrable tangle of prickly bramble, into which we might pitch stones in vain until we were startled by the same note issuing from the next thicket. Often as I expended time, eyes, and powder, I only secured three specimens, after killing perhaps a score; for to retrieve them was almost hopeless. They start up, and dart down the moment they have cut short their abrupt distrain. A snap shot, and, unless the bird fell impaled on a thorn, search was useless, with a bottom six feet deep in tangle. I once had a double shot, which cost me dear. Wading up a tributary of the Barada in pursuit, I at length got a good momentary view of the prize; but while securing him some of the shot had gone further, and on the other side of the bramble-thicket had struck a peasant of Zebdany in the face and eye. The Syrians are not so amiable as Lord Lilford's pretty Spaniard promised to be had he bagged her along with his *Cettia* (Ibis, 1866, p. 383): and as we were sitting in our tents at dinner, quite unconscious of harm inflicted, we were invaded by a posse of villagers under arms, who imperatively demanded damages; and, though we carefully extracted all the shot corns, and satisfied my quarry that neither eye was at all injured, the shot proved dear enough, and that *Cettia orientalis* is one of the most costly specimens in my cabinet.

The most conspicuous and attractive of all the Warblers of Palestine is *Aedon galactodes* (Temm.), and it is perhaps the most abundant in summer. But it returns very late. On the 14th April this species appeared in great numbers, and overspread every part of the country, wet or dry, where there were bushes or reeds. The return was simultaneous, and from that time its bright chestnut plumage, with its black-and-white-tipped tail expanded like a fan, enlivened every thicket and thorn-bush. In no way whatever does it resemble the Marsh-Warblers in action or note. Its song is low, soft, and mellifluous. It is constantly seen, and, instead of skulking in thickets, hops here and there, perching on the outmost bough of any bush or on the stem of a tall cane, expanding and jerking its tail like a Wren. It is curious that a bird which remains all the winter in the Sahara should be so late a migrant in the warm regions of the Holy Land. The species there is identical with that of South Europe and North Africa; and out of the innumerable birds we saw, of which we preserved over thirty specimens, I never met with an individual of *Aedon familiaris* (Ménétr.), said to be the common species in Asia Minor, and also given by Dr. von Heuglin in the list of birds from the Red Sea (Ibis, 1859, p. 341) to the exclusion of our bird. Can there be some error here? After examining Mr. Gould's specimens from Smyrna, I can have no hesitation in assenting to the marked difference between the two. The nests of *Aedon* are very easy to find, and our old African experience assisted us; for the tamarisk is its favourite tree, and without more attempt at concealment than an English Mistletoe-Thrush, it piles its large nest in a low fork. As in Algeria, so here, we found the serpent's skin an invariable ingredient in the lining of the nest, and the green lizards our provoking rivals in egg-collecting. The Palestine eggs, of which I have a large series, are very much more delicately and sparsely spotted than those of Africa, and, arranged together with them, would at first sight be pronounced to be distinct. Yet we took perhaps twenty nests in each country, all of them indisputably identified, and the distinction holds uniformly true. The skins are precisely alike. Lindermayer gives April 27th as the date of return to Greece, where the species is identical with the Palestine bird, and not *A. familiaris.* I found it breeding in canebrakes by the shores of the Dead Sea the last day of April, and in June on Lebanon at a height of 7000 feet.

The section *Hypolais* is well represented by three species. Of these the largest, *H olivetorum,* is confined to the olive-groves and the oak-coppice in the north of Palestine, generally near the coast. Further inland its place is taken by the nearly allied *H. upcheri,* nob. (Proc. Zool. Soc. 1864, p. 438), which has probably been confounded with its congener. The lesser species, *H. elaica,* abounds everywhere, and, returning in the end of March (our first specimen was shot March 23rd), takes the place of the Willow-Wren, *Phyllopneuste trochilus,* which has by that time moved its camp northwards. I conceive that *H. upcheri* and *H. elaica* are the eastern representative species of *H. icterina* or *italica* and *H. polyglotta.* They correspond precisely in measurements to these species respectively, but differ similarly in the entire absence of the green and yellow hues in the coloration, which is ashen on the back and ashy-white below. Yet they differ very decidedly in their eggs from their western representatives.

The key to the specific distinctions of all the species of *Hypolais* is in the relative length of the bastard primary. In *H. olivetorum,* the largest of the genus, it is extremely small, only reaching half the length of the outer tectrices. In *H. icterina, H. upcheri,* and *H. obscura* of South Africa it is the same length as the tectrices. In the smaller species *H. polyglotta, H. elaica,* and *H. pallida* of North Africa it is considerably longer. I may here mention that I can discover no distinction whatever, after the most careful comparison, between *H. icterina* of Italy and *H. obscura* from Damaraland: their coloration and measurements precisely correspond. It has been already mentioned that the eggs of all the species bear a very strong family likeness, though each is distinct at a glance.

H. elaica is the most common species in Palestine, frequenting, however, chiefly the warmer valleys and the plains of Jordan. It commences its nest immediately on its return. This is a very neat, compact structure, of a deep cup-shape, its depth equalling its diameter, formed of fine grass and strips of bark, and tightly lined with thistle-down and vegetable cotton. It is placed two or three feet from the ground, in a fork of the small *Solanum sanctum*, or on the twigs of a tamarisk or oleander, containing four or five eggs, of salmon-tinted white ground, with purplish spots and streaks like those of *H. pallida* and *H. olivetorum*. In markings they resemble those of *H. polyglotta*, but have not their rich pink ground-colour. Its note is soft and melodious, something like our Lesser Whitethroat; and the male often indicated the nest by singing continuously, concealed in a tree close by. Our first recognition of Upcher's Warbler was from finding a nest in an orchard under Mount Hermon, from which a bird stole off, which I took to be *H. elaica*, till I noticed the eggs to be of a rich salmon ground and almost as large as those of the Olive-tree Warbler. I waited till the bird returned, and then secured both parents, when I ascertained that I had got hold of an exactly intermediate species. Its note is unlike that of *H. elaica*; and it frequents very different localities, the uplands of Hermon and Lebanon, in the vineyards and oak-coppices. The nest was usually placed in a bush of *Vitex agnus-castus*, or Linden tree, never more than a yard or two from the ground, neat and conspicuous. We found this bird very abundant in its restricted localities. Its eggs most resemble those of *H. polyglotta* in ground-colour, but are twice the size, I think that for beauty they are unrivalled among the whole family of Sylviads. The bird has been described by me, as above mentioned.

With the genus *Phyllopneuste* for the most part we could only make acquaintance in winter, when our Willow-Wren, Chiff-Chaff, and others positively swarmed in every part of the country, and especially in the Jordan valley. With *P. trochilus* and *P. rufa* were mingled a few of other species. I take Ehrenberg's *Curruca viridula* to be only our *P. trochilus*; but we shot a few specimens of a bird which I took at the time for *P. rufa*, but which is larger and corresponds with Mr. Strickland's description of his *P. brevirostris*, obtained at Smyrna in winter. We also got one or two specimens of the Yellow-browed Warbler, or so-called Dalmatian Regulus (*Reguloides superciliosus*) at Jericho, creeping among the thicketsby the waterside, but never saw it again elsewhere. It appears to be only a scarce straggler in winter. The earliest of these species to depart was the Chiff-Chaff, true to its character as the earliest arrival in England; and by the end of February the whole of them had disappeared. The Willow-Wren remained a fortnight later.

It was curious that we never met with a specimen of *P. sibilatrix* in winter; but on the 26th April they suddenly appeared, on which day Mr. Bartlett shot more than a dozen, and until the second week in May they were very common, after which we saw them no more; nor did we ever find a nest. The species seems merely to be of passage on its way to the north. In Algiers I have noticed them in the beginning of April. Before their return, about the 1st of April, *P. bonellii* arrived and rapidly dispersed to its various haunts, remaining to breed, which no other member of the group did. Its habits are like those of *P. trochilus*, its voice very weak, and its nest on the ground, with eggs closely resembling our Wood-Wren's, but with the spots red rather than chocolate-colour. Bonelli's Warbler seems to affect the wooded hills, as Carmel, Tabor, and the lower slopes of Hermon, in preference to the low grounds, where we did not meet with it.

Of the other Sylviads, the Common Redbreast (*Erythacus rubecula*) was scattered everywhere by ones and twos throughout the country in winter, singing lustily when all else was silent, and as bold and familiar as at home; but not one remained after February. The common Whitethroat and the Blackcap are very abundant everywhere, and remain throughout the year; but the numbers of the former appeared to be increased, and of the latter considerably diminished, in spring. The nests of the Whitethroat became a perfect nuisance when out searching with the Arabs. Every second nest discovered was sure to be *Sylvia cinerea*; but with our Bedouin one nest was as good as another, and off one had to trudge, perhaps from watching some rare Bunting or Redstart, to inspect our familiar friend, whom we scorned to disturb. The Palestine specimens are much clearer in plumage than our own, and slightly larger; the tail, however, is too long to suit Mr. Blyth's diagnosis of *Sylvia affinis.* It is curious that, while this bird and *S. curruca* are alike cold-weather visitants to India, *S. cinerea* is a permanent resident, but *S. curruca* only a spring migrant in Palestine. It returned in March, and was very common in the hill-country, breeding everywhere. We found its eggs high up on Lebanon the second week in June, elsewhere in May. *Sylvia hortensis* we only found in spring, and it remained to breed; while *S. atricapilla* was far more abundant in winter than afterwards, though still common enough. In winter it was gregarious, and all the males we shot were in the same livery as the females, the black cap not being assumed till March.

On the bare highlands of the wilderness of Judæa, and on the desolate plains of Jordan, a few individuals of *S. conspicillata* might constantly be seen, flitting briskly from one little tuft of salsola to another, and, as in Malta and the Sahara, permanent residents. In the salt-plain, at the south end of the Dead Sea, I shot in January a single specimen of *Sylvia doriæ*, a species which I took to be new, but which I find very accurately defined by Dr. De Filippi (Viaggio in Persia, p. 348). He found it very abundant in salt-deserts. The Rev. F. W. Holland has also brought it from the Sinaitic peninsula. Rüppell's Warbler, *Sylvia capistrata*, is another permanent resident, but scarce, and only found in similar localities to *S. melanocephala*, which is very generally distributed, and remains throughout the year in the scrub on the sides of the upland wadys, secreting itself, after the manner of our Wood-Wren, in the bushes of *Poterium* and Lentisk. We met with twenty specimens of the Sardinian for one of Rüppell's Warbler. We were unable to make any observations on the habits and nidification of this rare and little-known species. In Algeria both birds are likewise resident; but while I there obtained many nests of *S.*

melanocephala, we were not fortunate enough to discover one in Palestine. There was one curious contrast between its habits in Algiers and Palestine. In the former it resorts to the gardens and hedgerows close to the city, like our Hedge-Sparrow, and is not found in the open country or in the Sahara. In Palestine we repeatedly took it in the winter in the wadys abutting on the Dead Sea, and even at Jebel Usdum, the salt-mountain, wherever there was a little fresh vegetation. A large series of these specimens exactly corresponds with those of Algeria. But at the same time we found in the more luxuriantly wooded districts, as at Jericho, another very closely affined species, distinct in its coloration at first sight and rather smaller, which I do not find noticed by any writer. I venture, therefore, to describe it, and dedicate it to my friend and companion Mr. H. T. Bowman, who shot the first specimen.

SYLVIA BOWMANI, Tristram, sp. n.

S. melanocephalæ simillima, at paullo inferior staturâ et gracilior. Pileo nigro distinctiore, et abruptè definito, neque ultra occiput descendente. Suprà tota pallide cinerea, nec grisea nec nigro-olivacea ut in *S. melanocephala.* Subtus purè alba, abdomine infimo pallidissimè vineo tincto.

Long. tota 5, alar. 2·15, caudæ 2·2, tarsi 0·75, rostr. a rictu 0·5 poll.

Hab. in valle Jordani.

Had we not found these two species in the same district I should have hesitated to discriminate them; but the difference in coloration can scarcely be an individual variation, while the habitats, of the one in the open scrub, of the other int he tropical wood, are very distinct.

Sylvia orphea is another summer visitant, returning in the beginning of April, and affecting chiefly the groves and olive-yards of the northern part of the country. Near Banias, under Mount Hermon, it is especially abundant; and its note, with greater compass, but not more sweetness, than the Blackcap, resounds in the early morning, and is continued at intervals through the day. The nests were loose open structures, rather shallow, and placed in low bushes near the ground. The eggs were generally laid the first week in June, though we found some earlier. Ehrenberg makes the Palestine species distinct from the western, under the name *S. helenæ,* on account of the difference in the length of bill; but though the average run of specimens have certainly longer and stouter bills than European individuals, yet we obtained both forms, and in one instance found the male bird long-billed, and the female, shot from the nest at the same time, of the ordinary European type.

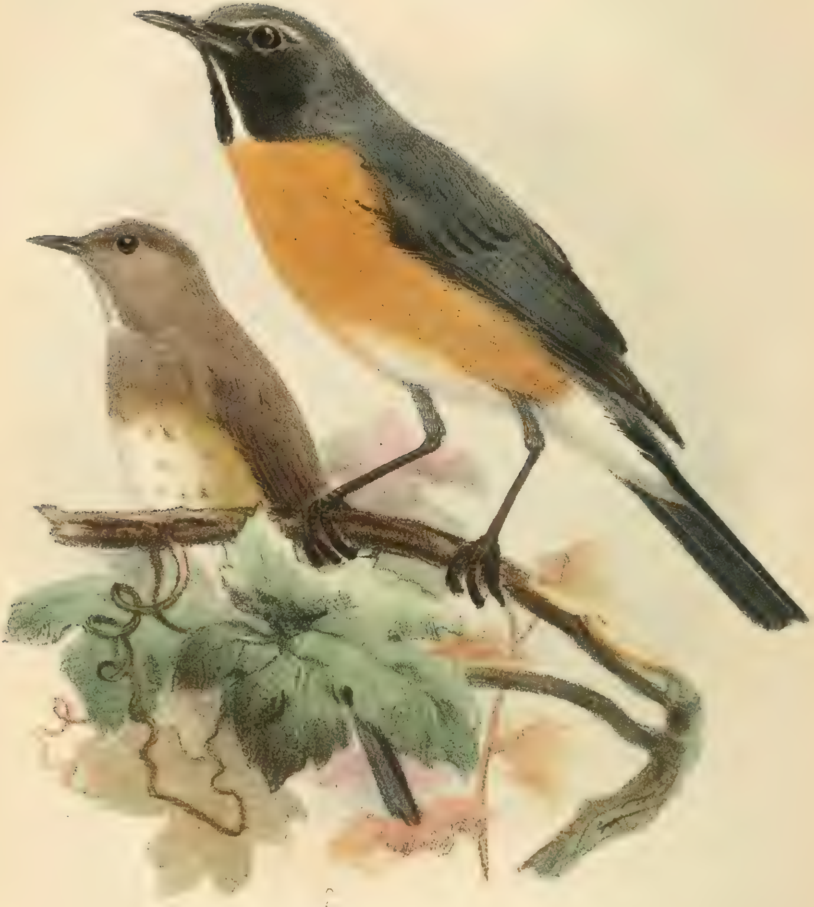
The beautiful *Nisoria undata* we only saw for two days in April. Our party was separated. I was at Jericho, and on the 27th saw numbers of these birds scattered up and down the wadys, generally skulking among the bushes, very shy and restless; Mr. Cochrane and I shot and preserved several; but in two days they had all disappeared. Mr. Bartlett was at the time on Mount Tabor. On the 28th he there secured half a dozen specimens in the Wady Bireh and on the Plain of Gennesaret, but never saw one again, though we believed we detected it once or twice on Lebanon in June, but were unable to secure or identify it. No other passing migrant, except the Wagtails, appeared to hasten so rapidly through the country. The Greater Nightingale (*Philomela major*), though an Eastern form, we never recognized; but the common Nightingale, *P. luscinia,* returned in tolerable numbers about the middle of April, frequenting especially the fringe of trees by the banks of the Jordan. We also found it on Tabor and in various wooded wadys.

Cyanecula leucocyanea and *C. suecica* are both of them winter visitants, resorting to the marshy lowlands and the banks of small streams, frequently in consort with Pipits. We found the two species sometimes together, though the former was the more common. They remained up to the middle of April, after which we saw them no more. They are very quiet; and we never observed them to perch, or leave the marshy grounds, being at this time of the year decidedy aquatic in their habits.

Of the Redstarts we obtained three species, the most common and conspicuous being *Ruticilla tithys,* which finds a congenial home throughout the year in the rocky hills of the Holy Land. During winter it is the most common and conspicuous bird on those dreary ranges, and especially affects the sea-coast, as near the Ladder of Tyre. It is partially migratory, ascending in spring to the spurs of Lebanon and the sides of Hermon, very few remaining further south to breed. Whether the so-called *R. cairii* be a species or not I cannot say, or whether, perhaps, it is only an imperfect state of plumage; but we shot males in that sombre livery in winter at the same time that we obtained a far greater proportion in the full rich plumage, with the white on the wing-coverts very distinct. We had few opportunities of noting it when the season advanced, and did not then obtain any males in the garb of *R. cairii.* The common Redstart, *R. phœnicura,* was strictly a summer migrant, arriving simultaneously all over the country about the 12th March, but only in the more wooded localities and the neighbourhood of gardens.

The third species, *R. semirufa,* H. & Ehrenb., is most restricted in its range, occurring only on the higher slopes of Hermon and Lebanon. On the former mountain it is scarce, and though we saw two specimens we were unable to secure them, and our first captures were in June on ascending to Ainât from the plain of Cœle Syria, where it was plentiful in the stunted oak-groves. While shy and wary, the male bird is too striking in appearance easily to elude observation, and its restlessness, cheerful and varied note, and habit of perching on an exposed bough or stone, expanding and jerking its bright cinnamon tail, soon betray its presence. Though its range is so extremely limited, yet in the Lebanon district it frequents all kind of ground alike, both the naked cliffs and summits of the range, the woods, and especially cedar-groves, and not less the mulberry-plantations of the villages. At the famous Cedars it was very abundant, and we saw at least fifty scattered about there. Its song resounded from the lower boughs of the old patriarchs; but after expanding its tail for a few seconds, it always changed its perch and flitted on, sometimes going into the open, perching like a Rock-Chat on a boulder, and then dropping out of sight on the other side. The back, wing-coverts, throat, and breast are glossy black, with an iron-grey cap; the rest of the lower part of the body, with the rump and tail, bright cinnamon, the two middle rectrices alone being for two-thirds of their length a darker russet. There is no trace of white about it anywhere. The female is very like that of the Indian *R. aurorea,* wanting only the white wing-spot, of a uniform russet, except the tail, which is like the male's. I have never seen any other member of the genus which can be confounded with it. *R. rufiventris* approaches nearest to it, but is very different both in the colour of the back and in the proportion of the red. It is strange that so peculiar a form should not have been elsewhere noticed, not even in Asia Minor or in Persia by Dr. De Filippi. Most birds of restricted geographical range are sedentary. Whether *R. semirufa* be so we have not ascertained; but if it be not merely a summer visitor, it is remarkably late in nesting; for on the 26th June, on going down from the Cedars to Meiruba, we took a nest with four eggs not very hard-set, having caught the bird with the hand, as she remained under the little crevice in the rock where the eggs were deposited in a slightly built nest. It was on the ground, on the side of a precipitous hill. On the preceding day we had obtained two nests of *Emberiza cia*—not a bad capture so late in the year; and the final close of our nesting-season was on the 26th June, when descending the Lebanon, with the glorious view of the Mediterranean, on which we were soon to embark, just opening before us. The colophon of my egg-book for 1864 is, "Nest of 4 eggs, *Ruticilla semirufa*, ♀ caught on nest. Eggs not before known." I may add that they are like those of our common Redstart, but of a more delicate and paler blue.

Of the Rock-Thrushes, *Petrocincla saxatilis*, whose red tail and Redstart-like habits link it most closely with the *Ruticillinæ*, is in most parts of Palestine merely a passing traveller, and tarries but a night. On the 8th April the whole of Mount Gerizim was covered by a restless flock of these birds, which, at a distance, we took for the Black Redstart, so exactly did they resemble that bird in their actions. They hopped restlessly from rock to rock, never taking a flight of more than a few yards; and in this fashion, in loose order, ranging for perhaps a mile in breadth, they appeared to be steadily proceeding northwards. When the foremost line had reached the valley, they took a flight across to the foot of Mount Ebal, over the gardens, and then more leisurely mounted the hill. We shot about a dozen, but, being at the time without the assistance of Mr. Bartlett's nimble fingers, I only saved a pair. Afterwards



$\frac{2}{3}$

J. Wolf del. et lith.

M & N Hanhart imp.

[illegible]

we occasionally met with this bird in the Upper Lebanon in the month of June, where, no doubt, it was breeding.

Very different in its manners, though not in its home, was *Petrocincla cyanea,* the well-known Blue Thrush. All the year round it is to be found wherever stones crop above the surface, whether by the shore, on the hills, or especially among ruins, but always solitary. Rarely ever were a male and female to be seen together. I had scarcely expected to find it as I did, along with the Black-and-white Kingfisher on the coast, sitting among the surf-beaten rocks and feeding on sandlice and shrimps. On two occasions I killed it from the shore, and had to wade into the sea to secure my specimen. Unsociable as it is, it yet frequents the dwellings of man, a taste for stonework evidently overcoming all other prejudices; but nowhere is it more thoroughly at home than among the ruins of a deserted and untrodden Roman city, like Gerash, Rabbah, or Gadara. The "vomitoria" of the amphitheatres are exactly to its liking; and in the recesses of these it has its nest, the male meanwhile perched on the top of an old column and uttering his dolorous ditty. Mr. Cochrane and I took a nest with four fresh eggs on April 2nd, in one of the robbers' caves in the Wady Hamam, near the Sea of Galilee. The nest was conveniently placed on a shelf far in, without any attempt at concealment, and was like the nest of our Blackbird, with mud mingled with the straw, instead of a shell of cow-dung. This bird is with good reason believed to be the "sparrow that sitteth alone upon the housetop" of the Psalmist. The young birds were fledged at the beginning of May. The eggs are a very pale blue, smaller than those of the Thrush.

A link also between *Ruticilla* and *Saxicola* is to be found in *Bessornis albigularis* (Plate I.). This bird was first described by Herr von Pelzeln at Vienna in October 1863, under the name of *Saxicola albigularis,* from Smyrna specimens of Dr. Krüper's. My reasons for changing the genus I shall give. De Filippi (Viagg. in Persia, p. 347) has set forth a new genus, *Irania,* and described under it a bird as *Irania finoti,* which, so far as I can make out, is nothing else than the female of the *B. albigularis.* It is impossible, I think, for any one, on observing this beautiful form, whether in life or as a cabinet specimen, not to admit that, though Saxicoline in its affinities, it is a very aberrant member of the group. It corresponds in all generic features with Sir A. Smith's genus *Bessonornis* (recte *Bessornis*), which was formed for the reception of more than a dozen African species, differing from *Saxicola* in the length of tarsus, elongated tail, and having the rufous coloration of *Ruticilla*. To this type our present species undoubtedly belongs, in proportions, anatomy, coloration, and habits; and De Filippi's genus *Irania* appears to me a mere repetition of the older *Bessornis*.

On the afternoon of June 4, 1864, I was rambling alone among the vineyards and pear-orchards which stretch about three miles above Rasheiya to the very verge of the naked sides of Hermon, and the icy water from the melting snows was trickling even then, in refreshing rivulets, through the channels which intersect the primitive enclosures. It had already been a day *cretâ notanda* in my collecting journal. I had just taken my first nest of *Hypolais upcheri*, shot the birds, and ascertained I had a new species in my bag. I had secured four or five specimens of a Serin unknown, with a nest of hard-set eggs; and this, too, proved to be new, my *Serinus aurifrons*. Two new species on the highway of ordinary travel were pretty well for a day's work; and I sat down, and was employed in blowing the eggs of Upcher's Warbler, when from a pear-tree overhead burst forth a song equal to that of the Thrush, but shorter; it was new to me; but I could not see the musician. He began again, and I caught sight of a jerking red tail in a pear-tree at a little distance. I took it for *Petrocincla saxatilis*, as he perched with his back to me, and the sun glanced upon him. Soon the eggs were hurried into my case, and I was up in pursuit. Off he went out of the vineyards to the bare moraine beyond, and sat, Chat-like, on a boulder. I kept him in sight as he popped from rock to rock, and at length, as he was returning towards his first perch among the fruit-trees, I had a fair shot at him, and he fell just outside the crumbling wall, not a feather lost or soiled. "African again!" said I to myself, as I fondly examined my prize. I soon heard another male of the same, but had only a distant glimpse of him, and it was too late in the day to remain longer in pursuit. The females were, no doubt, sitting not far off; but I never saw them, and a more hopeless labyrinth in which to search for the nests of ground-builders like the Chats cannot be conceived. The very vineyards are merely long rows of parallel ridges of loose stones, six feet wide and four feet high, raised at intervals of twelve paces, and on which the vines are trailed. One might have to remove a whole ton-weight of stones on the chance of finding a nest, even when the bird had been exactly marked in. The few nests of Rock-Chats that are in my cabinet I hold to be among my hardest-earned treasures. No Chat or Redstart I ever heard has so clear or bell-like a note as *B. albigularis*; and if it were more prolonged, it might rival the Bulbul's. My female specimen was procured a week or two later, among oak-coppice on the eastern shoulder of Lebanon, where she was incubating. Again we heard her mate among the thick foliage of the evergreen oaks, but did not obtain him. The eggs are very pale blue, thickly studded with brown spots, and larger than those of the Wheatear.

In the *Saxicolinæ*, Palestine is richer than in any other sub-family. No less than nineteen species enriched my collection; yet not one of these was new. Nearly the whole of the species were obtained in the very narrow limits of Southern Judæa, a district admirably adapted for these birds, which are in rocky and saline deserts the representatives of the Sylviads of our woods and glades. Many of the species are closely allied in form and plumage; yet often amongst the nearest there is some very marked distinction. Thus few birds can be closer than *Saxicola lugens*, Licht., and *S. libanotica*, H. & Ehrenb., the only differences being that in the former the black extends right across the back, and the feathers of the vent are faintly rufous, while in the latter the black is interrupted in the centre of the back, and the vent is like the belly, white. But the one is a summer migrant, the other a resident. In *S. lugens* the sexes are precisely alike in plumage; the female of *S. libanotica* is an ashy-brown bird, which might without comparison be easily taken for *S. isabellina*, from which it differs only in size and in the greater extent of white on the rump.

Again, in the case of the *resident* Chats, their extremely restricted habitat is remarkable. Often within very narrow limits they are numerous, yet do not occur beyond these in districts apparently as well suited for their development. This is especially the case with respect to the genus *Dromolæa. D. monacha,* Rüpp., a Nubian bird, which I never found in the Sahara (though it is erroneously given by Loche, who mistook for it the next species, as I ascertained by examination of his specimens), we only met with at the south end of the Dead Sea, about the salt-mountain of Jebel Usdum. Nor has it yet been noticed from Arabia. When in full plumage it is the most elegant of the group. It is the type of *Dromolæa,* and is more slender and graceful than any other species. The bill is very long and slender, and the tail longer than in any of its congeners. The adult male has not only the head, nape, and belly, but also the whole tail, with the exception of the two median rectrices, spotless white, the rest of the plumage glossy black. In the young male the plumage is more dusky and the white less pure. The female is ashy-brown instead of black. We obtained it in all stages of plumage.

In the same region, but extending much further into the rocky wilderness and higher up the western shores of the Dead Sea, is *D. leucocephala,* Brehm, a much stouter and more robust though shorter bird, and with a very strong bill. The sexes are identical in plumage; and the whole under surface is glossy black, while the white does not extend nearly so far on the rump as in the last species. With reference to the contrast between their bills, we may remark that while *D. monacha* lives on the sand and on the salt-hills, this one seeks its food among the rocks above. It was an old acquaintance of mine in the Algerian Sahara, as was also *D. leucopygia,* Br., of which we procured a few in the rocks above Engedi. The only distinction between these two is the snow-white cap of the former; but in many of my specimens, both African and Asiatic, a white feather or two peeps out on the head of *D. leucopygia.* It is possible the cap is acquired by age; but certainly both forms breed, and I never found them interbreed. They may do so, yet we generally saw a few of the one type in one locality and a few miles off would meet with two or three of the other. I believe that in Nubia they are said to intermingle. There is not the slightest difference between the sexes*.

While riding across the southern wilderness from the south end of the Dead Sea, we came upon a rolling plain to the south of Moladah, a day's journey east of Beersheba, covered with stunted scrub, chiefly of *Passerina hirsuta*, on a loose sandy soil. All exactly resembled what is called the Forest of the Chambaa in the Sahara. Larks were flocked in thousands; Sand-Grouse of three or four species ran on in the distance or rose in clouds with a whirr and a scream; the Common Dotterels mingled with *Charadrius asiaticus* were feeding in myriads, unconcerned at our presence. Bird nature was indeed alive, in glad contrast to the lifeless rocks over which we had recently scrambled. Here we renewed acquaintance with two species which I first described from specimens shot in the Chambaa wilderness (Ibis, 1859, p. 58), *Calandrella reboudia* and *Saxicola philothamna*. For the moment I seemed transported to the Sahara. Almost every bird, every plant around was identical. *S. philothamna* was most abundant. I believe we secured about a dozen in an hour; and the birds were not in flocks, but in scattered pairs. Yet it has nowhere been discovered in the intervening 1500 miles between its two known habitats. We never saw it afterwards; and the scrub where it resided cannot be more than ten miles in extent. It has been subjected to a divorcing process in its nomenclature. The female used to stand alone in the Berlin Museum, marked *Saxicola ruficeps*; and again, unless I mistake, Sig. De Filippi has renamed a female specimen *Dromolæa chrysopygia* †.

The Common Wheatear, *S. œnanthe*, we never saw in winter or till 19th March, when Carmel was covered with them. They only remained a few days, and then passed northwards. Most of them were of the large-billed variety named *S. rostrata* by Ehrenb., but we got others with bills no larger than English specimens. On the top of Hermon and Lebanon, close to the snow, we found the Wheatear breeding in great numbers at the beginning of June. All we examined there were *S. rostrata.* I never saw any specimens so bright in plumage. The proportions of the bill in the two varieties are 2 to 2·25 inches in width at the nostrils, and 7 to 9 inches in length. While our own Wheatear only appears on migration, a very closely allied form belonging to the hotter regions of Northern Africa, *S. isabellina*, remains all the year, and breeds on Hermon, only two hours' walk lower down than *S. rostrata.* Mr. Sclater pointed out to me the identity of *S. saltatrix*, Ménét., with *S. isabellina*, Rüpp.; and I fully agree with him, excepting that there seems to be a slight constant difference in size between the two,—the species which breeds in mountains being rather the larger, and that which is so numerous in the Judæan desert in winter, which I take to be the typical *S. saltatrix*, having a black line from the gape to the eye, wanting in all the northern specimens, and which I can scarcely take to be merely a seasonal distinction. The nest and eggs of *S. isabellina*, which have not before been described, are exactly like those of our common Wheatear. We found them in the beginning of June hard-set.

---

* Of most of these Chats I have given full descriptions in 'The Ibis,' 1859p, p. 296–301, which render a more lengthened account unnecessary.

† [*Cf. suprà*, pr. 61.—Ed.]

The only Chat which is a permanent resident and generally distributed, though not in large numbers, over the whole of Northern and Central Palestine, *i. e.* the Hill-country, is *S. libanotica*, H. & Ehrenb., which has been already mentioned, and the differences between it and the *S. lugens* of Lichtenstein pointed out. It differs similarly in its back plumage from *S. leucomela*, Gould, while the vent of both is white. It is a very conspicuous bird on the rocky hills by the coast, but does not come so far inland as the next species, nor is it ever found in the Dead-Sea region. It was not till the breeding-season that we ascertained the remarkable difference between the sexes, having taken the female for a distinct species. She has a uniform cinereous back, dark brown wings, white rump; tail white, with broad black termination like the male; throat pale ashy brown, rest of the lower parts dull white. They breed under stones, laying four or five eggs of a delicate bluish white, with pink freckles sparsely scattered over the whole surface, and which are not to be distinguished from those of *S. philothamna* or *S. lugens.*

The *S. leucomela*, Pall., with the black back and white vent-coverts, we only obtained once, but may often have overlooked it; but the *S. lugens*, Licht. (*S. leucomela*, Temminck), with the russet vent-coverts, was very common throughout the year in the rocky regions overhanging the Jordan valley and in the Judæan wilderness. If *S. libanotica* were Israelite, *S. lugens* was of Judah; for never out of Rehoboam's kingdom did we find it. There it remained, its plumage varying neither from sex nor season, always at once to be identified by its ruddy vent. While we shot it by the shores of the Dead Sea, it also resorted to the fallow fields of the uplands; and on one occasion I found a nest (with young instead of eggs, fortunately or unfortunately as the case might be) in the stone wall of a barley-field. We once took the eggs exactly like those of *S. libanotica*.

Of what we may term the Stapazine subdivision of the section, five species occurred to us. Of my *Saxicola halophila* I obtained but one specimen, under Jebel Usdum, the salt-mountain, where also alone *S. monacha* occurred. My type specimen I also procured at a salt-mountain in the Sahara. Another species, similar in its habitat but much more widely diffused, *S. deserti*, Rüpp., frequents the shores of the Dead Sea, north and south. It is frequently found in Africa, east and west, in Arabia, and is stated by Jerdon to be also common in suitable localities in Northern India. It differs from *S. stapazina* of Europe in its head and back being sand-coloured instead of rufous, and the black of the throat extending down the breast and on to the shoulder. It is also a permanent resident. In its winter dress the black portions of the plumage are powdered and mottled with white on the borders of the feathers.

But the exact analogue of the Western *S. stapazina* is *S. eurymelæna*, H. & Ehrenb. It is a spring migrant, returning in great numbers in March. The first we obtained was on the 16th. On all the hills and cultivated plains, north and south, it was then found very plentifully, scattered everywhere like the Lark. There seems to be a curious change of plumage after its migration. The specimens we shot at first were all russet-colour like the Stapazine; but this rapidly became silvery-white and of a lustre unrivalled in any other species. The white appeared to grow over the ruddy colour, especially on the head, which gives some of my skins a peculiar light iron-grey hue. The female has the whole of the upper parts and the throat a russet-brown, and the rest of the lower parts a reddish-white. This Chat has habits intermediate between those of the Wheatear and the Stonechat, often perching on bushes, and not dropping behind a stone so invariably as the Rock-Chats. In every state of plumage it can at once be discriminated from the Stapazine by the greater extent of black on the throat, and a corresponding extent of brown in the female. The eggs are exactly like those of its congener—blue, with red spots over the whole surface; and the nest is on the ground, generally in a crevice under a rock, sometimes at the root of a bush on the hill-sides.

We obtained but one specimen of *S. xanthomela*, H. & Ehrenb., at Shiloh in December. I was attracted to it by its flight and manner, very different from that of *S. libanotica*, which it closely resembles in the upper plumage; but, unlike any other member of the family, the black in front extends over the whole breast and down the flanks. The white of the head and back was tawny; but as the same feature appears in *S. eurymelæna* before it assumes the full nuptial dress, Ehrenberg's name is probably ill-chosen. It is, however, a most distinct species; and not the least curious fact in its history is its being found in winter where all those closely allied to it are summer visitants only.

A very few days after the return of *S. eurymelæna*, appeared the eastern representative of *S. aurita*, *S. amphileuca*, H. & Ehrenb. It varies in plumage exactly like *S. eurymelæna*, from the tawny to the iron-grey. The females also are exactly like the others, with the invariable exception that the throat, which is white in the male, is in the female of the same rufous tint as the rest of the under parts. Thus both male and female differ in the colour of the throat from the allied *S. eurymelæna*. This seems sufficient to decide the species; for in habits, note, nest, and eggs they are precisely alike. They inhabit, too, the same districts, even the same fields; but I can discover no trace of their interbreeding. The difference between the two species appears to be analogous to that between the Whinchat and the Stonechat—which no one ever dreams of confounding, any more than an observer of the living birds would confound the Palestine species, or the Stapazine and Eared Chats.

There are few more interesting birds in the Holy Land than the Blackstart, *Pratincola melanura,* Rüpp. (*Cercomela asthenia,* Bp.). It was first described from Abyssinia and Arabia, but is also mentioned by Dr. Jerdon as apparently extending to Sindh. Its Palestine range is most limited—the mouths of the wadys opening on the Dead Sea, up which it extends sometimes a few miles, so that it may be found sparsely up the whole ravine of the Kedron. It is a lively and fearless bird, perching rather more frequently on a bare twig than on a stone, and recalling the Stonechat much more than the Wheatear. Its note is only heard during the breeding-season, and is loud and not varied as it sits for some time motionless but for the jerking of its tail. The nest is placed in a chink among the boulders; and the eggs are like those of the Stapazine, but smaller, clear blue, with russet spots sparsely scattered over the surface. We first met with it not very far from Jerusalem, on the road to Jericho, and found it most abundant at Engedi, where we might have shot fifty in a morning. It is also common about the salt-mountain, but eschews the fertile oases, while it hangs about their outskirts. There is no difference whatever between the sexes. The only other members of the genus *Pratincola* are the Whinchat and Stonechat. The former (*P. rubetra*) we only observed on passage in spring passing to the northward, but never remaining to breed. *P. rubicola* was extremely abundant in every part of the country, from the Mediterranean shores to the Dead Sea, in winter, but took its departure in the beginning of March, not remaining even in the highlands of Lebanon. *Accentor modularis* only just makes good its claim as a bird of Palestine by residing in the Lebanon throughout the year, where, however, it is very scarce.

IV.—*A Month in Tripoli.* By W. T. H. Chambers.

Believing that the ornithology of Tripoli is a subject about which little has hitherto been known, I am induced to hope that the following short account of a month's sojourn in that country may not be unacceptable, especially as I devoted twenty-four days to a journey in the interior, chiefly with the intention of obtaining specimens, and at the same time of recording whatever birds I was able to recognize *en route.* My sanguine expectations of meeting with rarities, however, were not destined to be fully realized, as will be seen from the names of the birds mentioned in these remarks as having been actually obtained or identified with certainty by me. Many of the readers of 'The Ibis' are well aware that in camp-life one has little time for the preparation of specimens; and I avoided, in consequence, uselessly destroying birds with which I had been familiar in other parts of the East.

I took advantage of the English steamer connected with the telegraph, and leaving Malta on the 10th of March, 1866, arrived in Tripoli harbour the evening of the following day, but too late to disembark. I was informed, however, that, as travellers seldom find their way to Tripoli, facilities for a journey into the interior were simply *nil,* and the prospect of carrying out my intention seemed extremely small. The next morning I received a kind welcome from my friend Mr. F. R. Drummond-Hay, Her Majesty's Consul-General, who solved my difficulties for me at once, by introducing me to Mr. F. Warrington, a gentleman long resident in Tripoli, and thoroughly acquainted with the country; and to the united kindness of these two friends I am indebted for one of the pleasantest trips I ever made. Mr. Warrington most obligingly agreed to accompany me; but, owing to the necessity of sending into the country for camels, the preparation for the journey occupied two days and a half, which time I employed in exploring the environs of the town.

Tripoli is built, facing the east, on a tongue of land which, extending northward, terminates in a reef of rocks curving to the east, and forming an effectual breakwater against the north-west gales so prevalent in the Mediterranean. The town itself appears cleaner and more prosperous than many others under Turkish sway, and, with the considerable exception of a number of Maltese, contains very few European residents.

Passing through the Bab-el-Bahr, or gate near the sea, the traveller finds himself on the so-called "Pianora," a sandy expanse about a mile and a half long and half a mile in width, whereon is held a weekly market attended by Arabs, who, from a distance of even a hundred miles, bring the few native productions to exchange for cheap European wares both useful and ornamental. Crossing this plain, one enters a forest of date-palms interspersed with gardens, which extend eastwards along the sea-coast for about eight miles. It is but a narrow strip, however; for a ten minutes' ride southwards brings one to the borders of the desert which nearly surrounds Tripoli. Beyond this desert, at a distance of twenty miles, is a fertile plain some five-and-twenty miles in width, terminating at the foot of the Ghrian hills, the continuation of the great Atlas range. These hills, describing a semicircle round the plains and desert of Tripoli, strike the sea about sixty miles to the eastward of the town; and, though regarded by the Arabs as high mountains, they attain at most but an elevation of one thousand feet, expanding into a vast undulating plateau, which becomes more desolate and waterless as the traveller advances further southward, till it joins the confines of the Great Sahara, at the distance of about twelve days' journey from Tripoli. With the exception of occasional fertile spots, these hills are but thinly cultivated by the Arabs, whose prosperity has sadly diminished since the forced occupation of the country by the Turks. Nothing could exceed the hospitality and kindness I experienced at the hands of the Tripolitan Arabs, who hold Englishmen in such high esteem that the fact of being one is the best passport in the country.

The evenings of the two days I spent in preparing for my journey I strolled to the Pianora, where I observed *Cypselus apus* and *Hirundo rustica* to be very plentiful, and sporting around the ruins of the old castle. There is a tree growing in the courtyard of the British Consulate which forms the winter roosting-place of hundreds of *Passer salicicola*. Every branch and twig of it is thickly covered with them; and the noise they make is perfectly deafening. Towards spring their numbers gradually diminish, probably owing to the greater attractions the harvestfields then present. *Upupa epops* and *Motacilla alba* are also common; the former, by its frequently uttered call-note, appeared to be breeding.

At last the arrival of the camels from the country enabled us to make a start. Our party consisted of Mr. Warrington and myself, on horseback, with a cook, groom, and two camel-drivers. The camels carried our tents and baggage; and a stout jackass, with a pair of capacious panniers, served also to mount the cook. Besides my double-barrel and a rifle, I carried an "elevator" gun; and I cannot speak too highly of its utility for travelling on horseback.

The first day we journeyed eastward through narrow lanes among groves of palms, intermixed with fig-, olive-, carob-, orange-, and mulberry-trees, which afford a temporary resting-place to the migratory birds, for whose passage, however, I was unfortunately too early. These palm-groves terminate in a series of salt-lakes, at the edge of which we encamped for the first night; and as I set off with my gun through marshes overgrown with rushes the spot seemed to realize one's *beau idéal* of "happy hunting-grounds," especially as I had heard of the large bags of wildfowl made by Tripolitan sportsmen. I saw nothing, however, but a few Snipe and a flock of Plover, and in the far distance the snowy white plumage of a pair of Flamingos.

The nextday, skirting the Tajoura lakes, we entered the desert, following a track close to the sea. Here *Alauda cristata* was very common, and I once or twice distinguished an *Ammomanes*, probably *A. deserti; Corvus corax* and what appeared to be a Hen-Harrier passed by out of range. I shot a fine male specimen of *Lanius dealbatus*, the stomach of which contained the remains of a large desert-beetle. We crossed several deep gullies or "wadys," at the bottom of which were usually small streams, supporting a luxuriant vegetation on either side. I shot *Ægialites minor*, but feathered inhabitants were very scarce.

After three days in the desert we began to ascend towards the hills; and patches of cultivation appeared here and there, while Quails and Wheatears (*Saxicola œnanthe*) suddenly became numerous. Finding a pleasant shady spot among the hills, I determined to encamp for a couple of days and rest; for the hot south wind, which raised the thermometer to 90° or more in the shade, made travelling anything but agreeable. I shot here several Barbary Partridges (*Caccabis petrosa*), which abounded among the steep rocky hills covered with low scrub. These birds rise well to the sportsman approaching from above, but woe to him who seeks to follow them up the steep side of a hill; for they run on in advance till, disappearing over the crest before their pursuer reaches it, they take wing to the other side of the valley. An Arab brought me the eggs of this bird, seven in number, which he had just taken. I also found a nest of *Alauda cristata* placed close to the ground and containing three eggs. I here observed *Crateropus acaciæ*, but unfortunately could not procure a specimen, though, as I was familiar with this bird in Nubia, I feel sure I was not mistaken as to its identity. *Œdicnemus crepitans* I twice saw; and among the olive-trees which encircled our camp *Sylvia melanocephala* and *S. subalpina* were very pleniful. I sent off an Arab to Tripoli laden with a basket of hares and Partridges for my friend; and, in spite of the suffocating hot wind, he accomplished the distance of sixty-six miles on foot in twenty hours, and, after one night's rest, returned eighty miles to our next encampment in forty-four hours, and, so far from appearing fatigued, immediately set out to accompany me shooting for another twenty miles!

Another day's journey brought us to Lebdah, the site of the ancient Leptis, the ruins of which, now half-buried in sand, cover a large area. Even the sea itself has united with the sand and the wind in the work of destruction, and has made great inroads into what was once a flourishing city, and gold ornaments are often found by the natives on the beach after a storm. I passed two days amid this scene of desolation under the guidance of good Sheyk Omar, one of the most intelligent and hospitable of Arab chiefs I ever met with. *Columba livia, Athene persica, Tinnunculus alaudarius, Corvus corax* and *Saxicola stapazina* were the feathered inhabitants of the ruins, while on the banks of the stream which intersects the ancient city, the Green Sandpiper appeared to be the sole representative of the class which I had hoped to find more numerous. In a thorny tree I found a nest of *Lanius dealbatus,* placed about ten feet from the ground, composed of sticks roughly put together, and containing one egg. I subsequently found two more nests of this bird, containing eggs nearly ready to hatch.

Leaving Lebdah, we struck due south across the hills, and two days' journey brought us to Umsalahta, a large village with a Turkish governor, who received us in due form. On a neighbouring hill are the remains of a Roman castle, commanding a magnificent prospect over the hills stretching far away southward into the Great Sahara and bounded on the north by the distant line of the Mediterranean, while immediately below lay rich fertile valleys, covered with olive-trees that are celebrated for their great age and size. Among these groves I found *Lanius auriculatus, Petronia stulta, Ruticilla phœnicura,* and *Dromolæa leucura.* From Umsalahta, a long day's march brought us to a wild rocky gorge called El Dou-oun, the rugged sides of which abounded with jackals and foxes; and hyænas are not uncommon. This valley also shelters a predatory Arab chief and his myrmidons, who paid us a friendly visit, and brought a present of fodder for our animals, as a token of the esteem in which Mr. Warrington is universally held among all classes of Arabs. I made an excursion with my gun, following the course of a small streamlet, the sides of which abounded with Partridges and Pigeons, whilst from the rushes I flushed *Scolopax gallinago* and *Totanus ochropus.* I shot *Philomela luscinia* and *Ruticilla phœnicura,* and observed *Dromolæa leucura,* as well as, I think, *D. lugens.* The former were evidently breeding, though I was not able to discover a nest.

Emerging from this valley, we entered on a vast undulating and treeless plateau; and two days' march brought us to Turhona, the headquarters of a powerful tribe, whose sheyk gave us a warm welcome. I had been looking forward to our arrival on these plains as the reputed home of numerous Bustards; but, to my disappointment, I was assured that during the winter these birds migrate southward into the desert, and only reappear when compelled by the scorching heat of summer. This account was confirmed by an American gentleman resident in Tripoli.

Not far from our camp flowed a clear rivulet, forming what is a rare sight in that country, an extremely pretty cascade; and near this spot, for the first and only time during my journey, I recognized an old Nile acquaintance in *Cotyle rupestris*; for, so far as my observation went, this charming Rock-Martin appeared to confine its flight to this one little stream. On a neighbouring hill the common Wheatear and *Saxicola stapazina* were equally abundant; and I here observed *Petrocincla saxatilis* for the first time. *P. cyanea* I was surprised never to meet with. *Turdus pilaris* I think I once saw. While wandering near the waterfall just after sunset, I was delighted at hearing the unmistakeable clucking of Sand-Grouse, and soon perceived large quantities flying high overhead due south. An Arab informed me they constantly came to drink at this spot early. Next morning at break of day I was on the look-out. No Sand-Grouse, however, made their appearance; and my Arab, ever ready with an excuse, assured me that it was too cold; but the next day, on leaving Turhona, and travelling over a sandy plain covered with rough grass, I fell in with them in great numbers, though they were so wild that I could not once get within range. Their size and black breasts showed them to be *Pterocles arenaria*; but the Arabs asserted that two other species are also found there.

I shot *Alauda brachydactyla*, and saw a large Eagle, which I took to be *Aquila imperialis*; but he was too wary to allow me to make certain of the fact. With the exception of two, or perhaps three, species of *Circus*, birds of prey seemed scarce in Tripoli; and Vultures I never met with. Two long days' march over a wild country brought us to Ghrian; and *en route* I shot a pair of *Jynx torquilla*, and saw a pair of *Erythrospiza githaginea* in beautiful plumage. Ghrian boasts a Turkish governor; and its strong castle, built on the brink of a precipitous ravine, has stood many a siege. Its garrison are armed with English "Enfields." The great peculiarity of this district lies in the subterraneous habitations used by the Arabs. An enormous pit, some thirty feet wide and deep, is dug in the ground, and the earth thus excavated is piled round the edge, while the bottom of the pit forms the court-yard of the dwelling. On either sid are excavated large and spacious rooms, stable, kitchen, and so forth, which are at all seasons deliciously cool. The entrance to this Robinson Crusoe's habitation is formed by a subterraneous passage from the surface of the ground some fifty yards distant, and sloping gradually downwards till it emerges in the court-yard just described.

Our homeward route now lay due north, towards Tripoli; and a long day's march brought us to the foot of the hills. I heard for the first time the clear song of the Orphean Warbler, *Sylvia orphea*; and the Woodchat-Shrike, *Lanius auriculatus*, seemed very abundant among the olive-groves. Crossing the plain, I met with a large flock of Bee-eaters, *Merops apiaster*, and I also saw *Saxicola rubetra*, *Budytes flava*, and several more Bush-Babblers, *Crateropus acaciæ*. A pair of large Doves crossed our path, but of what species they were I do not feel sure. On the 17th April I found myself once more under the hospitable roof of our Consul-General, and on the 18th the Turkish steamer 'Tralulus Garb' afforded me an opportunity of returning to Malta. I afterwards travelled through Tunis and Algeria; but of no part of my trip do I entertain such pleasing recollections as of my month's sojourn in Tripoli.

V.—*Remarks on* Dr. Léotaud's '*Birds of Trinidad*'*. By P. L. Sclater, M.A., F.R.S. &c.

When we consider the easy communication so long established between Trinidad and this country, and the facilities afforded by the presence in that colony of professional bird-collectors, it is certainly strange that the magnificent forests of that island should have been so little visited by naturalists, and that up to the present time no connected account has ever been published of its rich avifauna. Except the interesting article contributed by our colleague Mr. E. C. Taylor to this periodical in 1864 *, I am not aware of any work having yet appeared relating specially to the ornithology of this island. It was with very great pleasure therefore that I received intelligence, some time since, that a resident in that favoured region was engaged upon a special study of its birds; and ornithologists have now to return their best thanks to Dr. Léotaud for the valuable addition he has made to their knowledge.

---

* Oiseaux de l'île de la Trinidad (Antilles), par A. Léotaud, Docteur en Médecine de la Faculté de Paris; Membre Correspondant de la Société de Médecine de Gand. Port d'Espagne: Chronicle Publishing Office, 1866. 1 vol. 8vo, pp. 560.

It is not, of course, to be expected that any one residing so far from the great civilized centres of scientific activity should be able to compile a work upon a subject so novel without making many mistakes. And it must at once be acknowledged that the present work is by no means free from errors. But, besides his distant residence, Dr. Léotaud has had other difficulties to encounter. There is as yet no general work upon South American ornithology for the student of any particular portion of its varied area to refer to; and until such a work appears, no sort of uniformity in the writings of the various authors who treat of its different constituent parts can be expected. In the absence of any such efficient guide no one can complain that Dr. Léotaud has thought it best to adopt the arrangement proposed by Mr. G. R. Gray in his 'Genera of Birds.' This, however, has led him, particularly in the order *Passeres*, to associate together many species of birds which are now nearly universally allowed to belong to very different families, besides involving the adoption of a somewhat antiquated style of nomenclature. It would have been better, perhaps, to have taken as an outline the arrangement put forward by Professor Baird in his 'Birds of North America,' or that adopted by Dr. Cabanis in the third volume of Schomburgk's 'Reise nach Guiana.'

Besides Mr. Gray's 'Genera of Birds,' Dr. Léotaud only cites, except in special cases, five other works—namely, Bonaparte's 'Conspectus,' Vieillot's 'Nouveau Dictionnaire,' D'Orbigny's 'Birds of Cuba,' Gosse's 'Birds of Jamaica,' and Wilson's 'American Ornithology.' Very few particulars as to the range and distribution of the species are given; and the details as to habits are somewhat scanty, except in some of the more noticeable cases. In the determination of the species, Dr. Léotaud acknowledges the great assistance he has received from Dr. Pucheran of Paris, but he does not state in each individual case, as it would have been advisable to do, whether examples have been submitted to Dr. Pucheran or not. The specific descriptions (in French) are tolerably full and complete; but on characters are given whereby the genera and higher groups may be recognized.

---

* Ibis, 1864, p. 73.

Dr. Léotaud commences his volume by some general remarks on the ornithology of Trinidad, alluding, in the first place, to its richness in species, 294 being the number of birds recognized in the present work, while Jamaica is stated to possess only 185, and Cuba 129 *. This is justly attributed to the close proximity of Trinidad to the American mainland. Trinidad is, in fact, nothing more or less than a bit of Venezuela, separated from the adjoining main at a very recent epoch, just as the British Islands have been divided from Europe. As Mr. Taylor has observed, there is probably no species of bird to be met with in Trinidad that is not also found in Venezuela, though many, doubtless, occur in Venezuela which do not extend their range into Trinidad. This is just as is the case with England and the Continent. Dr. Léotaud seems to recognize this fact to a certain extent, though he is still hampered by the notion that Trinidad has something in common with the Antilles (which form a very distinct and isolated province of the Neotropical Region) and North America. He talks of there being twenty species common to the United States and Trinidad; but when these cases are rightly investigated it will, no doubt, be found that the greater number of these twenty species find their way to Trinidad by Venezuela, and not by direct immigration. Granted that they are all direct winter-visitants to that island from the north, their number is insignificant when compared with that of the purely Neotropical forms, which make up the mass of the

---

* These estimates are certainly too small, and appear to have been based on the works of Gosse and La Sagra, which have of late years been supplemented in each case by the observations of several more recent authorities.

Trinidadian avifauna, and show its complete identity with that of Venezuela.

Having said thus much upon Dr. Léotaud's work, I will conclude with a few notes upon such points as seem to require special notice on turning over the pages of his "*partie descriptive.*"

Cymindis pucherani (p. 40) is a supposed new species of this genus, founded upon a single specimen. Can it possibly be *Urubitinga anthracina* or *U. schistacea*?

Caprimulgus albicollis (p. 72) is evidently a *Nyctidromus*, and should be placed in that genus—although nothing is said of the long naked tarsi, which render this form so easily distinguishable from *Caprimulgus*.

Chordiles minor (p. 76) is no doubt the South American *C. acutipennis*, not the *C. minor* of Jamaica. (*Cf.* P. Z. S. 1866, pp. 133–134.)

Hirundo rutila (p. 87) is a *Chætura* or *Acanthylis* (according to Dr. Léotaud's nomenclature) belonging to the family *Cypselidæ*. Has Dr. Léotaud ever obtained authentic examples of this species in Trinidad (he does not say so positively)? or does he put it into his list upon the authority of Robin and older writers? More recent authorities doubt its occurrence in this locality. (*Cf.* P. Z. S. 1865, p. 613.)

Cotyle uropyyialis, Lawrence (p. 94), ought probably to be *C. ruficollis* (Vieill.), the former being the *western* local form, and the latter the *eastern* representative of the species.

Dendrocolaptes altirostris (p. 166) is a new species of this difficult group, near to *D. picus*, but was considered by the late naturalist Lafresnaye, to whom it was submitted, to be specifically distinct.

Trichas velatus (p. 183) should be *Trichas* or rather *Geothlypis æquinoctialis*, *G. velata* being the Brazilian form of the species. (*Cf.* Cat. Am. B. p. 27.)

The *Tyrannus verticalis* sive *vociferans* of Dr. Léotaud (p. 213) is, no doubt, the common *T. melancholicus*, or its barely distinguishable northern representative *T. satrapa*. Neither *T. verticalis* nor *T. vociferans* (which are quite different species) range so far south.

Tyrannus magnirostris, so called (p. 215), is quite distinct from the Cuban bird of that name, and should be called *T. rostratus*, nobis. I have compared specimens of these two species; and there can be doubt of the propriety of their separation. The *Tyrannidæ* of Trinidad, as given by Dr. Léotaud, require a thorough revision. I much doubt the occurrence of *Myiobius stolidus, M. nigriceps, Elainea fallax*, and *Platyrhynchus æquinoctialis* in Trinidad. The supposed new species *Empidonax cabanisi* (p. 232) is also very dubious.

Procnias nivea, i. e. *Chasmorhynchus niveus*—the White Bellbird of Cayenne—is given by Dr. Léotaud (p. 261) besides *C. variegatus*, which has been pointed out (Ibis, 1866, p. 407) to be the true representative of this genus in this region. This is, in all probability, an error, as the occurrence of these two representative species in the same area would be an extraordinary phenomenon.

Saltator icterophrys (p. 285) should stand as *S. olivascens*, *S. icterophrys* of Lafresnaye being merely the female or young of the Central American *S. grandis*.

Pyranga hepatica is a purely Mexican species. The bird so designated (p. 291) is no doubt *Pyranga saira* (Spix). (*Cf.* P. Z. S. 1856, p. 124, and Cat. Am. B. p. 81.)

Tachyphonus albispecularis, sp. nov. (p. 300), is *T. luctuosus*, Lafres. et d'Orb., as I know from the examination of a typical example of this supposed new species kindly forwarded to me by Dr. Léotaud.

Psittacus agilis (p. 327) is a purely Jamaican species, which certainly does not occur in Trinidad. No doubt Mr. Finsch could tell us what species is described under this name.

The 294 birds recognized by Dr. Léotaud as found in Trinidad belong to the following orders :—

I. Passeres	119	V. Gallinæ......	2
II. Picariæ	46	VI. Struthiones ..	0
III. Accipitres	30	VII. Grallæ	60
IV. Columbæ	8	VIII. Anseres	29

VI.—*On the Genus* Cinclus. By OSBERT SALVIN, M.A., F.L.S., F.Z.S., &c.

(Plate II.)

WHEN proper attention is given to all the slightly varied forms under which many species present themselves, the difficulty of classifying such forms increases with the attention bestowed upon them,—that is, if the relationship which each bears to another be reduced to its proper value and yet brought into systematic arrangement. The definition of species founded on the presumed inability of hybrids to produce offspring is one that is not, and never has been, applied in practice: the fact is assumed from differences of form and colour, and the supposed absence of individuals intermediate in character between two distinct forms. What we really have to consider is, not that two allied species *cannot* interbreed, but that they *do not*—sometimes, perhaps, because they are never brought in contact in nature, at others because they *will not*, even when occupying the same country. That closely allied species do not interbreed is inferred from observation of facts of greater or less value, which, in the aggregate, tend to show that they keep themselves distinct. Differences of apparent character and their supposed constancy form the actual basis upon which species are differentiated; and it seems unreasonable, as the fact of constancy becomes more certain from the examination of a number of individuals, to reject a difference, however slight, that may exist between two supposed species and to refuse them specific rank.

The Common, the Ring-necked, and Japanese Pheasants are known to produce perfectly fertile crosses, and are good instances of easily recognizable forms interbreeding when artificially brought into contact. A scheme of nomenclature must assign such well-marked forms a place in any system of nature, and that by giving each a name. Our method, then, if it is to take cognizance of every constant form, must do so by naming each such form; and the only practical guide we have to determine our judgment in defining species is that of the stability of recognizable characters; and it is to the fact of the existence of such characters, rather than to their amount, that we have to look. At the same time it must ever be borne in mind that a certain amount of individual variation exists in all species, and that the history of every one is distinct from that of every other.

Taking this view, it follows that, instead of species having one minimum standard of value which would exclude constant forms of slight difference, the standard must be lowered to the point where constancy of differential character begins, thus taking a closer view of the varied degrees of the relationship which exists between species.

The genus Cinclus may well be made to illustrate the different degrees of affinity which subsist between the component specieso f many genera. Thus the relations of *C. aquaticus* to *C. melanogaster*, of the same to *C. leucogaster*, of the same to *C. pallasi*, and of the same to *C. leucocephalus* are all of markedly different values; and I have endeavoured, after assigning a name to every constant form, to show in the subjoined list the degree of difference each possesses. To do so, I have used the term "local race" for slightly modified forms inhabiting separate but comparatively adjacent districts, and that of "representative species" where the affinity is still clearly shown, but the difference more decidedly marked. I have not yet noticed the co-existence of closely allied forms in the same area in this genus; but the range of *C. melanogaster* doubtless sometimes overlaps that of *C. aquaticus* in the winter months, the return of the former to its own ground in summer restoring the separation of the two races in the breeding-season.

The distribution of *Cinclus* extends over the whole Palæarctic region where suitable mountain-streams occur. In the Indian region it is confined to the Western Himalaya and the island of Formosa. It also extends throughout the Rocky Mountains of the Nearctic region, and continues thence along the same chain into Southern Mexico, Guatemala, and Veragua, the northern province of the Neotropical region. In the Neotropical region it is again found along the streams of the Andes, from New Granada to Bolivia. No species are recorded from any portion of either the Ethiopian or Australian region.

The following is a list of the species of *Cinclus*, geographically considered:—

A. Species inhabiting the Northern Hemisphere.

a. Parti-coloured species of the Palæarctic Region.

1. **Cinclus aquaticus.**

Local races.

C. aquaticus. Central Europe and British Islands.
2. *C. albicollis.* S. Europe and Lebanon.
3. *C. melanogaster.* N. Europe, E. Europe (?), N.E. Asia Minor (Erzeroom).

Representative species.

4. C. CASHMIRIENSIS. Sikkim and Cashmere.
5. C. LEUCOGASTER. Central Asia, Altai Mountains.

b. Whole-coloured species.

a′. Belonging to the Palæarctic Region.

6. **Cinclus sordidus.** Cashmere.
7. **Cinclus pallasi.**

Local races.

C. pallasi. N.E. Asia and Japan.
8. *C. marila.* Formosa.
9. *C. asiaticus.* Himalaya.

b′. Belonging to the Nearctic Region and as far south as Veragua.

10. **Cinclus mexicanus.** Rocky Mountains to Mexico and Guatemala.

Representative species.

11. C. ARDESIACUS, Veragua.

B. Species inhabiting the Southern Hemisphere.

12. **Cinclus leucocephalus.** Andes of Peru and Bolivia.

Representative species.

13. C. LEUCONOTUS. Andes of New Granada and Ecuador.

We thus have five well-marked forms of *Cinclus* :—

1. *Cinclus aquaticus,* which consists of three constant but nearly allied local races and two more distinct representative species, all occupying different geographical areas; 2. *Cinclus sordidus,* which seems to stand alone; 3. *Cinclus pallasi,* represented by three distinguishable races occupying distinct

districts; 4. *Cinclus mexicanus,* which is represented by two forms; and 5. *Cinclus leucocephalus,* also represented in different localities by two members,—the total number of recognizable species being *thirteen.*

As all Dippers frequent subalpine streams, their general distribution is necessarily divided into isolated districts corresponding to the position of mountain-chains where such streams exist. Their non-migratory habit, in the wide sense of the term, maintains this isolation; and if the scanty materials at my disposal indicate any facts concerning their geographical distribution, they show that each race or representative species is isolated and restricted to its subarctic or subalpine region, according as each belongs to a northern latitude or to a corresponding climate found in a southern mountain-chain. The distribution of the several members of groups inhabiting the northern hemisphere seems fairly traceable to the same cause which so satisfactorily accounts for the distribution of arctic plants—namely, the glacial period, when the supervening cold drove the then existing species before it into more southern latitudes, and afterwards, as it receded, left individuals stranded, as it were, on every available mountainous region, where isolation under slightly different external influences brought about the various modifications that are now found.

The British Dipper is only a partial migrant; it leaves the higher streams in winter, and seems to follow them down, keeping to the same watershed. In the lower and stiller waters of rivers having mountainous sources fewer suitable feeding-grounds for the Dipper are found; hence the wider dispersal of individuals. In the case of the northern species, it would seem that cold winters drive individuals beyond the southern extremity of the Scandinavian peninsula; hence the occasional occurrence of *C. melanogaster* in Norfolk, Holland, and the southern shores of the Baltic*.

---

* If, as I suspect, *C. peregrinus,* Brehm, is the same as *C. melanogaster,* it shows that this race performs a more lengthened migration than any other, and that when once beyond the southern extremity of the Scandinavian peninsula it passes the low lands bordering the Baltic, and reaches the mountain-streams of Central Germany.

The following list gives a tolerably complete synonymy of each species, to which I have added a short description and list of such localities as I have been able to ascertain with certainty*:—

Family CINCLIDÆ.

Genus CINCLUS.

Cinclus, Bechstein, Naturg. Deutschl. iii. p. 808 (1802).
Hydrobata, Vieill. Nouv. Dict. i. p. 219 (1816).

A. Species inhabiting the Northern Hemisphere.
a. Particoloured species of the Palæarctic Region.

1. CINCLUS AQUATICUS.

Cinclus aquaticus, Bechst., Naturg. Deutschl. iii. p. 808. *Sturnus cinclus*, Gm., S. N. p. 803 (partim); Le Merle d'eau, Buff., viii. p. 134; Pl. Enl. 940; Briss., v. p. 252. *Turdus cinclus*, Lath., Ind. Orn. ii. p. 343. *T. gularis*, Lath., Ind. Orn. Suppl. pl. xl. (av. juv.). *Cinclus aquaticus*, Naum., Vög. Deutschl. iii. p. 935; Gould, B. Eur. pl. 83, and B. Gt. Brit. pl.; Yarr., Br. B. i. p. 173; Thomps., B. Irel. i. p. 116; Temm., Man. d'Orn. i. p. 178, and iii. p. 107. *Hydrobata cinclus*, Gray, Gen. B. *H. albicollis*, Vieill. (partim). *Cinclus europæus*, Steph. in Shaw's Zool. x. p. 313.

C. supra pileo toto, capitis lateribus cum collo postico obscure brunneis: interscapulio et uropygio cinereis nigro distincte squamatis: alis et cauda fusco-nigris, alarum tectricibus cinereo indistincte marginatis: subtus gula tota et pectore cum macula supra et infra oculos pure albis: ventre superiore saturate ferrugineo, ventre imo fere nigro: hypochondriis et crisso obscure cinereis: rostro nigro, pedibus obscure corylinis: long. tota 8·0, alæ 3·5, caudæ 2·0, tarsi 1·15, rostri a rictu 1·0 poll. Angl. ♂, Pennoyre, South Wales, November, 1859 (Mus. J. Gould).

Hab. British Islands and Central Europe.

The only specimens of this race which I have as yet seen are British; but as all the figures of the various German authors seem to agree with these, I believe the bird from Central Europe will be found identical with our Dipper. All the authors I have quoted refer to the ferruginous colour of the under plumage. Linnæus, on the other hand, in his concise description in the 'Fauna Suecica,' repeated in the 'Systema Naturæ' (1766), makes no mention of this character. Naumann states (iii. p. 937) that Boie observed numerous *Cincli* in northern Norway without finding them different from ours—and goes on to say, "we cannot assume that such a difference (*i. e.* that between *C. melanogaster* and *C. aquaticus*) could have escaped the notice of so excellent an observer as Boie." Naumann had not seen specimens of *C. melanogaster*, and I hardly feel satisfied that it was not that bird which Boie really observed*.

---

* For the propriety of using Bechstein's genus *Cinclus*, see Professor Baird's remarks in his 'Review of American Birds,' p. 59, note.

2. Cinclus albicollis.

Hydrobata albicollis, Vieill., N. D. i. p. 219, and Enc. Méth. p. 686 (partim). *Cinclus aquaticus*, var. *rufiventris* et *albiventris*, Hempr. & Ehr., Symb. Phys. Aves, fol. *bb* (Ibis, 1859, p. 38). *C. aquaticus*, Tristram, Ibis, 1864, p. 436, and 1866, p. 291†.

---

* In a paper by Brehm, published in 'Naumannia' for 1856 (p. 178), a number of races or varieties of the European Dipper are described. Not having by any means an extensive series of skins of this bird from the different parts of Europe which it inhabits, I feel that it is not possible from descriptions only to determine whether or not they are entitled to rank as local races. I must, however, say that it appears to me that too much stress is placed upon insignificant characters, and that these "subspecies," as Brehm calls them, are many of them little better than varieties selected from the races I am able to recognize; nor is any satisfactory law limiting their geographical distribution traceable. The so-called species and subspecies appear to me to arrange themselves as follows:—*C. medius* (p. 185) is a variety of *C. aquaticus*. *C. meridionalis*, *C. rufipectoralis* (p. 186), and perhaps *C. rupestris* belong probably to the race I call *C. albicollis*. I should have preferred using the name *C. meridionalis*, did I really know it belonged here. *C. peregrinus* (p. 187) and *C. septentrionalis* (p. 188) belong to the race *C. melanogaster*, which doubtless has, as all the specimens I have considered to belong here, twelve and not ten tail-feathers. Nothing can be satisfactorily made of these birds without an examination of Brehm's types.

† The following references also probably apply to this race:—

Savi, Orn. Tosc. (1827) i. p. 200 (Tuscany); Benoit, Orn. Sicil. (1840) p. 49, and Malherbe, Faun. Orn. Sicile (1843), p. 58 (Sicily); Crespon, Orn. Gard (1840), p. 108, and Jaubert, Rich. Orn. Mid. Fr. p. 272 (Southern France); Cara, Orn. Sard. (1842) p. 42 (Sardinia); Powys, Ibis, 1860, p. 233 (Albania and Epirus); Lilford, Ibis, 1866, p. 390 (San Ildefonso, Spain).

C. similis *C. aquatico* sed supra valde pallidior marginibus plumarum dorsi et uropygii brunnescentioribus: subtus abdomine toto pallidiore, hypochondriis brunnescentioribus.

Hab. Switzerland, Lebanon, and also probably all the mountainous districts of the south of Europe.

Mus. Brit., J. Gould et H. B. Tristram.

The white colouring of the under surface seems to extend lower down the body than in the English; the brown colour of the head and neck, which is decidedly paler, also extends further down the back; but these points are difficult to determine in skins.

This race, which has already been twice mentioned by Mr. Tristram, is easily distinguishable from the more northern bird. Mr. Tristram has kindly lent me one of his Lebanon skins, which has enabled me to compare it with Swiss specimens in the British Museum and in Mr. J. Gould's collection. Scarcely any difference is perceptible between them. The ferruginous colour of the under plumage is rather brighter in the Swiss bird, which more nearly, as regards the extent of white of the breast, approaches the northern race; but these are distinctions too insignificant to form a basis of separation, and, from so few specimens, cannot be proved to be constant. Though Vieillot, in redescribing the Dipper of Europe, certainly did not mean to restrict the application of the name, *C. albicollis* to this race only, have, to avoid giving a fresh designation, taken advantage of his placing the Pyrenees and Alps at the head of his list of localities to adopt his name. The Alps and the Lebanon are the only two localities which I can actually assign to this race; but it ought certainly to frequent suitable intermediate localities, and probably also the Pyrenees and Spain. Specimens are required to prove this, and also to ascertain the northern limits of its range, which may include the mountains of Central France.

3. CINCLUS MELANOGASTER.

Sturnus cinclus, Linn., Fauna Suecica, no. 214, and Syst. Nat. p. 290 (1766); Nozemann, Nederl. Vog. tab. xiv. (1770). *C. melanogaster,* Brehm, Lehrb. Eur. Vög. i. p. 289 (1823); Temm., Man. d'Orn. iii. p. 106; Gould, B. Eur. pl. 84, and B. Gt. Brit. (sub *C. aquatic.*); Adams, P. Z. S. 1859, p. 180. *C. sep-*

tentrionalis, Brehm, Lehrb. i. p. 287, and Naumannia, 1856, p. 188. *C. peregrinus*, Brehm, Naumannia, 1856, p. 187 (?). *C. aquaticus*, Kjærb., Danmarks Fugle, p. 135, tab. xv.; Nilsson, Sk. Faun. Fogl. i. p. 371 (1858); Von Wright, Finlands Fogl. p. 165 (1859); Zander, Uebers. Vög. Meklenburg's, p. 66; Gould, P. Z. S. 1834, p. 51 (Trebizond); Fraser, P. Z. S. 1839, p. 120 (Erzeroom); Godman, Ibis, 1861, p. 80 (Bodö, Norway) Stevenson, B. Norf. i. p. 69 (Norfolk).

C. similis *C. aquatico*, capitis et colli postici coloribus saturatioribus et abdomine medio fere omnino nigro distinguendus.

Hab. Scandinavian Peninsula—Lapland (*Wolley*), Carlstad, Sweden (*Wheelwright*), Gottenburg (*Mus. Brit.*); Denmark (*Kjærbölling*); Asia Minor, Erzeroom (*Robson*); England—Norfolk occasionally (*Stevenson*); Holland occasionally (*Nozemann*).

Six specimens of this race (two from Carlstad, two from Northern Lapland, one from Norway, and one from Erzeroom) exhibit the constant differences from *C. aquaticus* I have pointed out above. They vary a little in size; the largest specimen, one from the Muonio River, exceeds the male from South Wales described above. In a collection of birds from Asia Minor recently sent to Prof. Newton by Mr. Robson is a single specimen of a Dipper which differs in no way from Scandinavian specimens, though the second and third primaries not being fully grown show a rounder wing. Dr. Adams mentions a specimen from Russia in Sir W. Jardine's collection. This locality is a step towards filling up the wide distance between the two extreme limits of the range of this race, which may possibly extend along the Ural Mountains and also be found in the Caucasian range.

The ferruginous colour of the under plumage is not entirely absent, but is very dark and limited in extent.

There can be little doubt but this is the true *Sturnus cinclus* of Linnæus, first described in the 'Fauna Suecica,' and afterwards again in the edition of 1766 of the 'Systema Naturæ,' where no mention is made of the rufous colouring*. Nearly all subsequent writers had the Central European form before them. The occasional appearance of Dippers in Holland is mentioned by Temminck; that these are of the black-breasted race seems likely, from the fact of one of these birds being figured in the old work of Nozemann. Their occurrence in Holland is probably due to the same cause which drives them to the Norfolk coast, namely the severity of winter in the Scandinavian peninsula.

---

* Those ornithologists therefore who prefer to use the generic term *Hydrobata* should restrict the name *H. cinclus* (L.) to this race.

4. CINCLUS CASHMIRIENSIS.

Cinclus cashmiriensis, Gould, P. Z. S. 1859, p. 494, and B. As. pl. *Hydrobata cinclus*, L. Adams, P. Z. S. 1858, p. 489, and 1859, p. 180. *H. cashmiriensis*, Blyth, Ibis, 1866, p. 374.

C. supra capite toto cum collo postico et dorso obscure brunneis, hoc saturatiore: uropygio, alis et cauda fusco-nigris, plumis obscure cinereo marginatis: subtus gula et pectore albis, abdomine fuliginoso, versus pectus rufescentiore: long. tota 8·0, alæ 4·0, caudæ 2·3, tarsi 1·1, rostri a rictu 1·0.

Obs.—*C. aquatico* similis, sed abdomine fuliginoso, dorso brunneo, et statura majore distinguendus.

Hab. Ladakh, Thibet; Duchinpara, Cashmere (*L. Adams*); Sikkim (*fide Blyth*); Persia (*Mus. Brit.*).

Mus. Brit. et J. Gould (spec. typ.).

The above description is taken from the type specimen kindly lent me by Mr. Gould. The feathers of the lower back and uropygium are somewhat worn; but the coloration appears to be the reverse of what is found in *C. aquaticus*, being black with grey margins, instead of grey with black margins *; the margin, too, of the white breast is not so clearly defined as it is in *C. aquaticus*. The spurious primary also is longer than that of any specimens of the European races, which seem to vary somewhat in this respect.

5. CINCLUS LEUCOGASTER.

Sturnus cinclus (var.), Pall. Zoogr. R.-As. i. p. 426. *Cinclus aquaticus*, var. *leucogaster*, Radde, Reis. S. O. Sib. p. 218. "*C. leucogaster*, Eversm.," Middend. Sib. Reis. i. p. 163; "Brandt in Tchithatcheff's Voy. Sc. Altaï, p. 418," Gould, B. As. pl.; Bp., Consp. i. p. 252.

---

* The bird described by Pallas (Zoogr. R.-As. i. pp. 425, 426) as *Sturnus cinclus* may be this species; he says, "*Caput* cervix obsolete fuliginoso nigra, *dorsum* nigrius, opacum, plumis singulis litura lunulata canescente notatis," &c.

C. supra fuscus, pileo cinereo-brunneo, capitis lateribus et nucha dilutioribus: subtus albus, ventre imo et hypochondriis fuscis: crisso cinereo.

Hab. "Ad Jeniseam et in orientali Sibiria" (*Pallas*); Udskoi-Ostrog (*Middendorff*); Semipalatinsk (*Hartlaub, fide Gould*).

Mus. Derb. et Brem.

I have not seen this species, which, though closely allied to *C. aquaticus,* is easily distinguishable by its almost entirely white under plumage. I have nothing to add to Mr. Gould's remarks in his 'Birds of Asia,' except to state that the bird called *Cinclus aquaticus* by Radde from South-east Siberia is this species, and not *C. cashmiriensis* as Mr. Blyth supposes (Ibis, 1866, p. 374), as will be seen by reference to Radde's work *.

Its geographical range seems to be confined to streams of the northern slopes of the Altai chain, the sources of the great rivers of Northern Asia.

b. Whole-coloured species.

a′. Species of the Palæarctic Region.

6. CINCLUS SORDIDUS.

Cinclus sordidus, Gould, P.Z.S. 1859, p. 494, and B. As. pl.

C. obscure brunneo-niger, pileo, nucha, gula et pectore dilutioribus.

Hab. Ladakh, Thibet (*Adams*).

Mus. Brit.

This species seems to stand alone, corresponding in its sombre colour with *C. pallasi* and its allies, but having otherwise the "facies" of *C. aquaticus* and the white-breasted group.

It forms one of the three species inhabiting the Western Himalayas.

7. CINCLUS PALLASI.

Sturnus cinclus, var., Pallas, Zoogr. R.-As. i. p. 426. *Cinclus*

---

* Radde (*l. c.*) says that he could find no description of *C. leucogaster* in Eversmann's 'Addenda ad celeberrimi Pallasii Zoographiam Rosso-Asiaticam.' I have not been able to find Tchithatcheff's 'Voyage Scientifique dans l'Altaï,' where, Mr. Gould says, is a notice of this bird. If it is there described under this name, the synonymy must stand as above; if not, the specific name must be ascribed to Bonaparte, who gives a short diagnosis in the 'Conspectus.'

pallasi, Temm., Man. d'Orn. i. p. 177, and iii. p. 107; Temm. & Schl., Faun. Jap. p. 68, tab. xxxi. B; Von Schrenck, Amurland, p. 331; Radde, S. Ost. Sib. p. 220; Gätke, J. f. O. 1856, p. 71, and Blasius, Ibis, 1862, p. 66 (Heligoland); Blakiston, Ibis, 1862, p. 320; Swinhoe, Ibis, 1863, pp. 277, 334; Gould, B. As. pl., and B. Eur. pl. 85.

C. obscure brunneus, unicolor: ventre medio nigricantiore, dorso et uropygio nigro squamatis: alis et cauda fusco-nigris: long. tota 8·0, alæ 4·0, caudæ 2·5, tarsi 1·25, rostri a rictu 1·1.

Hab. Baikal to Kamschatka (*Pallas*); Amoorland (*v. Schrenck*); S.E. Siberia (*Radde*); Japan (*Blakiston et al.*).

Mus. J. Gould (Nagasaki).

There can be little doubt that Temminck's conjecture, that the specimen he originally described came from the Crimea, was erroneous, and that the true habitat of this species is Japan, Amoorland, and adjacent parts. It still has a claim to a place in the European fauna, from the fact of a specimen having been killed in Heligoland (Gätke, J. f. O. 1856, p. 71). The three races of this dark-coloured group are very similar, but yet distinguishable by apparently constant characters; they all occupy distinct isolated districts, and hence must be separated. The synonymy of this species as given by Von Schrenck is entirely wrong.

8. CINCLUS MARILA.

Cinclus marila, Swinhoe, J. R. As. Soc. (Shanghai), 1859; Ibis, 1860, p. 187. *C. pallasi*, Swinhoe, Ibis, 1863, p. 272; Gould, B. As. (sub *C. pallasi*).

C. pallasi vero similis, sed paulo pallidior: subtus omnino fuliginoso-brunneus et supra plumarum marginibus nigris, dorsi et uropygii absentibus.

Juv. fusco-niger, supra nigro squamato: subtus gula et abdomine albo, pectore badio, variegatis.

Hab. Formosa (*Swinhoe*).

Mr. Swinhoe has, I think, been somewhat hasty in uniting the Formosan bird he described under this name with *C. pallasi* of Japan, as it does not appear he ever compared specimens from the two localities. In the absence of the black edgings of the feathers of the back, it more nearly resembles *C. asiaticus*, but is much darker than the Himalayan race. It is another instance of the peculiarity to be found in almost all Formosan birds.

9. CINCLUS ASIATICUS.

Cinclus asiaticus, Sw., Faun. Bor.-Am. ii. p. 174; Adams, P. Z. S. 1858, p. 489, and 1859, p. 180; Gould, B. As. pl. "*C. tenuirostris*, Gould," Bp., Consp. i. p. 252. *Hydrobata asiatica*, Gray, Gen. B.; Blyth, Cat. Mus. As. Soc. p. 158; Horsf. & Moore, Cat. B. Mus. E. I. Co. i. p. 185. *Cinclus pallasi*, Gould, Cent. B. pl. xxiv.; Gray, Cat. Hodgs. Coll. B. M. p. 78; Vigors, P. Z. S. 1830–31, p. 54. *C. maculatus*, Hodgs. Zool. Misc. 1844, pp. 83, 173 (av. juv.).

G. brunneus, unicolor: *C. pallasi* similis sed valde dilutior, rostro tenuiore.

Juv. cinereus, albo variegatus, gula alba.

Hab. Lower and middle streams of the Western Himalayas, and also Ladakh, ranging northwards as far as Chinese Tartary (*Adams*).

Mus. Brit.

b'. Species of the Nearctic Region with Mexico and Central America.

10. CINCLUS MEXICANUS.

Cinclus mexicanus, Sw., Phil. Mag. 1827, i. p. 368; Sclater, Cat. Am. B. p. 10; Baird, Rev. Am. B. i. p. 60; Salvin, Ibis, 1866, p. 190. *Hydrobata mexicana*, Baird, B. N. Am. p. 229. *C. pallasi*, Bp., Zool. Journ. ii. p. 52, and Am. Orn. ii. p. 173, pl. 16. fig. 1. *C. americanus*, Sw., F. B.-Am. ii. p. 173. *C. unicolor*, Bp., Comp. List, p. 19, and Consp. i. p. 252. *C. mortoni*, Towns. Narr. p. 337. *C. townsendi*, Aud. in Towns. Narr. p. 340.

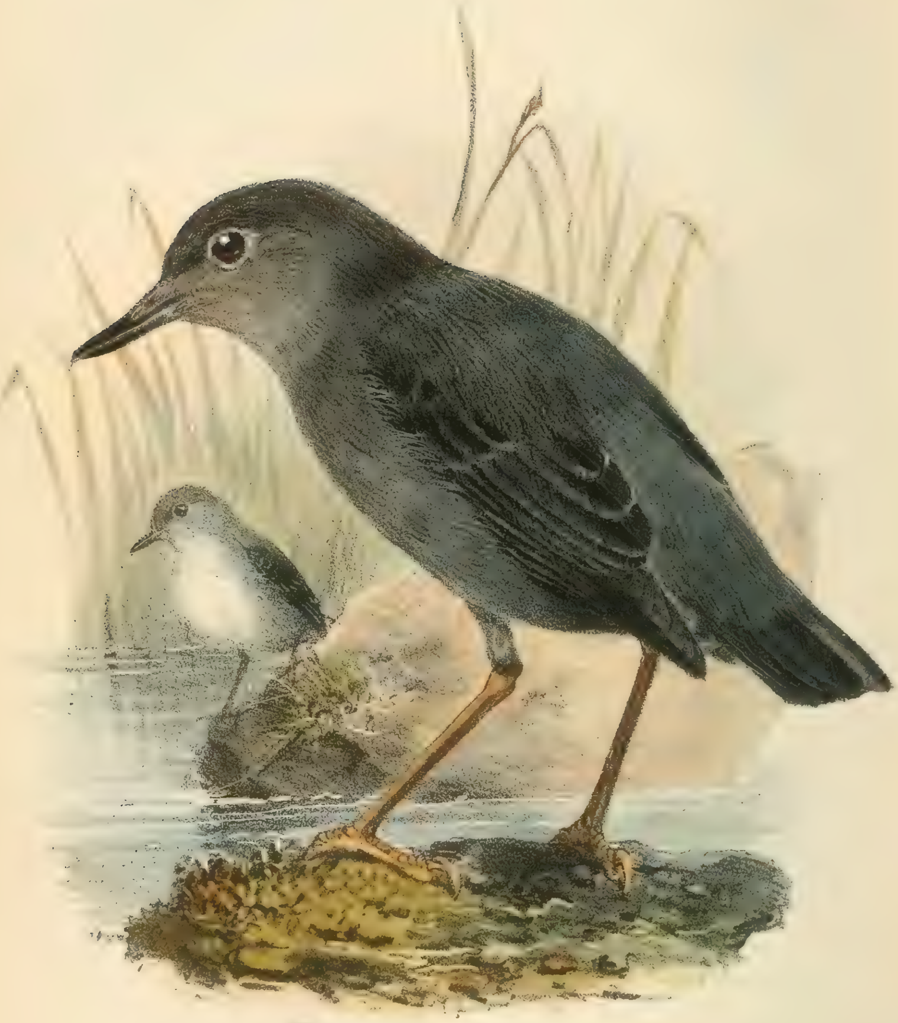
C. obscure cinereus, capite undique fuscescente: long. tota 7·2, alæ 3·7, caudæ 2·0.

Hab. Rocky Mountains of North America, Mexico, and Guatemala (?)

Mus. Salvin & Godman.

Mexican specimens of this Dipper, as Prof. Baird has pointed out, are somewhat darker than northern examples, and the colour of the head and neck more distinctly defined and darker. These differences are very slight and seem hardly sufficient to warrant

Ibis, 1867. Pl. II



J. Wolf del. & lith.

M & N Hanhart imp.

CINCLUS ARDESIACUS

separating them into races; nor have I enough specimens satisfactorily to establish the constancy of these characters. I only *saw* specimens of Dipper in Guatemala which seemed to be the same as the Mexican bird; but, as we find that in almost every instance where these birds occupy isolated districts, a slight modification of colour is also observable, I should not be surprised to find that the Guatemalan bird is no exception to the rule, frequenting as it does the streams of the highest ridges, 10,000 feet above the sea.

11. CINCLUS ARDESIACUS, sp. n. (Plate II.)

C. cinereus, subtus dilutior, capite toto fuscescente, gula albicantiore, alis et cauda fusco-nigris, alarum tectricibus et secundariis cinereo marginatis: ciliis ut in fere omnibus hujus generis speciebus, albis, rostro nigro, pedibus flavis: long. tota 5·5, alæ 3·2, caudæ 1·6, rostri a rictu 0·9 poll. Angl. ♀.

Juv. ♂. Corpore subtus albido, alarum tectricibus albo terminatis.

Hab. Veragua, Cordillera de Tolé (*Arcé*).

Mus. Salvin & Godman.

The primaries are proportioned as in *C. mexicanus*; namely, the third and fourth are nearly equal and longest, the second equalling the fifth, and the spurious first primary being about the same length as that of the northern bird. It is at once distinguishable from its ally by its smaller size, pale cinereous colour, its long bill (equalling that of *C. mexicanus*), and long yellow tarsi and feet. In its pale colour it more nearly resembles a specimen we have from Nebraska than our Mexican example.

Two specimens of this interesting addition to our knowledge of this genus were lately forwarded, in a collection of birds, from Veragua, where it was collected by M. Enrique Arcé in a district he calls the Cordillera de Tolé, situated between Chiriqui and the town of Santiago de Veragua. Unfortunately he sent no note of the altitude at which he met with these two specimens, nor any information respecting them, except marking the sexes.

B. Species inhabiting the Southern Hemisphere.

12. CINCLUS LEUCOCEPHALUS.

Cinclus leucocephalus, Tsch., Av. Consp., and Faun. Per. Av. p. 180, pl. 15. f. 1; Bp. Consp. i. p. 252; Baird, Rev. A.B. i. p. 61.

C. fuscus, capite et pectore albis: rostro nigro, pedibus plumbeis.

Hab. Peru, province of Jauja (*Tschudi*); Bolivia (*Mus. Smithson.*).

13. CINCLUS LEUCONOTUS.

Cinclus leuconotus, Sclater, P. Z. S. 1857, p. 274, and Am. Cat. p. 10, pl. 2. "*Cinclus leucocephalus,* Tsch.," Lafr., Rev. Zool. 1847, p. 68.

C. fusco-nigricans, dorso medio et capite toto cum corpore subtus ad ventrem medium albis: pileo dorsoque fusco variegatis: rostro nigro, pedibus obscure corneis: long. tota 5·5, alæ 3·8, caudæ 1·6.

Hab. Andes of New Granada, Pasto (*Delattre*); Ecuador, near Quito (*Mus. Jardine*).

Mus. Brit. et P. L. Sclater.

These two Andean species, as will be seen, differ widely from any inhabiting the northern hemisphere. Though long known, they are still quite rare in collections.

It will be seen that I have in the above remarks considered the geographical distribution and range of each race and species of the *greatest importance*; indeed, as ornithological or any other biological science advances, it becomes more and more apparent that accurate knowledge on this point is absolutely necessary for the satisfactory establishment of species. A difference of habitat has almost come to be equivalent to a distinctive character when accompanied with an actual slight constant difference of form or colour. I believe that there is more evidence to be obtained towards elucidating the problem of the origin of species from close study of facts of geographical distribution than from any other source. The attractions of such study are manifest, and I would especially recommend it to British ornithologists. Let them follow up the range of almost any one of our common English birds, and they will be doing good service. Even the House-Sparrow (*Passer domesticus*), followed through all its local forms, would be most instructive; but to do this they must extend their observations beyond the limits of these islands. This, under all circumstances, is necessary for attaining an accurate knowledge of our bird-fauna.

VII.—*Notices of Recent Ornithological Publications.*

1. English.

The expectations of ornithologists throughout the world by our late announcement of Messrs. Sclater and Salvin's projected work* will not, we are sure, be disappointed by its appearance. The readers of 'The Ibis' know well the thorough manner in which these gentlemen are accustomed to deal with any subject they take up; and the letterpress of the first part of 'Exotic Ornithology' is as much superior to that which accompanies any of the 'Planches Enluminées' or 'Planches Coloriées' as the progress of science would warrant. The species represented in this part are:—

Lipaugus unirufus, *Scl.*
—— subalaris, *Scl.*
—— rufescens, *Scl.*
Furnarius torridus, *Scl. & Salv.*
Xipholena atropurpurea (*Max.*).
Ptilogonys caudatus, *Cab.*
Vireolanius melitophrys, *Bp.*
—— pulchellus, *Scl. & Salv.*

all from that New World on which the affections of our friends the authors are so fixedly set. The figures are the best we have seen of Mr. Smit's drawing since he has been in this country; and though to an eye accustomed to the masterpieces of our great artist they may be deficient in life and picturesqueness, yet the structural peculiarities and details of plumage, the importance of which cannot be overrated, are well preserved; and we must also add that the copies we have seen do great credit to the colourer. The monographic character of the work is already shown, by the introduction of a synopsis of the known species of several of the genera illustrated. We trust that the authors and their enterprising publisher will receive ample encouragement from the public in their undertaking.

The first impressions of the "intelligent stranger," whose advent to London is the ever-recurring theme of so many newspaper-articles, might lead him to suppose, if he were an ornithologist, that in the vicinity of England's capital no birds but Sparrows are to be found; and certainly such busy scenes as

* Exotic Ornithology, by Philip Lutley Sclater, M.A., Ph.D., F.R.S., Secretary to the Zoological Society of London, and Osbert Salvin, M.A., F.Z.S., &c. Part I. October 1st, 1866. London. Imp. 4to.

are presented by railway-stations, like Camden Town and Clapham Junction, would fortify him in that belief. Nevertheless the unpretending and agreeable little book which Mr. Harting has just published* shows that the metropolitan county is far from being wanting in localities of ornithological interest. One, at least, of the chief requirements of modern civilization provides haunts for species which other "improvements" might tend to banish. Water cannot be supplied to large towns without reservoirs; and such natural or artificial receptacles are often goodly lakes, as witness the one at Kingsbury, which, with its extent of many acres, offers attractions that few passing migrants of aquatic propensities seem able to resist. Of the 225 species which, according to Mr. Harting, have been observed in Middlesex, a very large proportion have occurred in this locality, and a view of it forms an appropriate frontispiece to the volume. Mr. Harting, we must say, seems to have admitted a few species on rather slight evidence—among them the first he mentions, *Aquila chrysaetus.* The anonymous gentleman who recognized this species on the wing must indeed be "well acquainted with the bird" to have distinguished it from the White-tailed Eagle. Mr. Harting, on the testimony of Edwards and Montagu, includes *Anthus ludovicianus*; but we would venture to suggest the far greater probability of the "Red Lark" of those two authors being the European *A. spinoletta,* which has been so long confounded with it, and which is recorded as having several times occurred in this country (*Cf.* Ibis, 1865, pp. 114–116). So also the Swallows with light chestnut underparts, which the author states that he has several times seen, are much more likely to have been examples of *Hirundo riocouri* s. *cahirica* (*Cf.* Ibis, 1866, p. 423) than the American *H. rufa,* or rather *H. horreorum.* We are glad to see that he disclaims *Progne purpurea* as Middlesaxon; for we have long thought that Mr. Yarrell had been rather too credulous as to the story he was told of that species occurring in England. We heartily congratulate Mr. Harting on his publication, which shows that he is a most pains-taking and careful ornithologist.

---

* The Birds of Middlesex. A Contribution to the Natural History of the County. By James Edmund Harting, F.Z.S. London: MDCCCLXVI. Post 8vo., pp. 284.

The Ornithological Ramble of our recently elected colleague Mr. Arthur Crichton* will no doubt be received with much pleasure by a large circle of readers, though we must complain that the influence of the Destroying Angel seems rather to predominate over that of the Genius of Ornithology in his pages; but as it is some time since we have had any account of the Orkneys from a naturalist's point of view, we are the less inclined to be hard to please in this respect. We may, however, remark that our worthy friend the author is mistaken in supposing that he has "strictly adhered to Mr. Yarrell's nomenclature;" for wherever that differs from the very irregular List in common use, the latter is followed.

The handsome volume recently brought out by Major King† contains an account of some of the birds of Canada, drawn up with more regard to scientific accuracy than is usual among sporting writers. Especially we must congratulate the gallant author on being aware that Wilson is not the latest or only authority on American ornithology—a piece of information certainly not possessed by several persons in this country who occasionally essay "to teach the young idea how to shoot." We have, however, to notice that Major King does not seem quite clearly to comprehend the grounds on which some ornithologists suppose that the Domestic Turkey has not been derived from the wild bird of Canada and the United States, but from that of Mexico (the *Meleagris mexicana* of Mr. Gould)--an opinion which may be correct or not, but one that is not influenced by the evidence adduced by the author, who is also, we think, somewhat premature in pronouncing the American *Anser gambeli* to be identical with the European *A. albifrons*, since he does

---

[*] A Naturalist's Ramble to the Orcades. By A. W. CRICHTON, B.A., F.L.S., etc. London: 1866. Fcp. 8vo., pp. 132.

[†] The Sportsman and Naturalist in Canada. By Major W. Ross KING, &c. &c., Illustrated with Coloured Plates and Woodcuts. London: 1866. Roy. 8vo. pp. 334.

not state that he has compared any series of examples from the two continents*.

Mr. Lord's two volumes† contain a good deal that is interesting respecting the habits of many of the birds of Western North America, which have hitherto been merely known to us as names and nothing else; at the same time it is clear that the author's sympathies are rather with the furry and finny than the feathered portion of creation, and the last consequently comes off second or even third best. Mr. Lord has small reason to be grateful to his printer or wood-cutter; but his book will, we think, please many of our readers, as it has pleased ourselves. In the list of species observed by him, which were upwards of 220 in number, perhaps *Aphriza virgata* is the most worthy of note. He greatly doubts the supposed provident habits of *Melanerpes formicivorus* which have been mentioned by former writers; but his observations on the point are not altogether satisfactory.

2. French.

The 'Mémoires de la Société Impériale des Sciences Naturelles de Cherbourg' for last year contain an essay on the classification of the *Trochilidæ* by Prof. Mulsant, with the assistance of MM. Jules and Edouard Verreaux. This paper, which has for its object to supply the want of an analytical arrangement of this numerous and difficult family, and to assign generic characters to each of the groups which compose it, has also been separately published*. The idea is indeed a sufficiently laudable one; for, much as these birds have been studied, scarcely any author has given more than a list of species grouped under a vast number of genera, a great many of which are merely nominal. Mr. Gould, it is true, in his 'Introduction to the *Trochilidæ*' (*Cf.* Ibis, 1862, p. 73), gave characters to the genera which he was the first to introduce; but there he stopped short, and left undefined a large number separated by other naturalists, many of which stand upon no firmer ground than the bestowal of a name and the indication of a type. As the authors of the present publication state that it is the precursor of a more extended work on the Humming-birds, we trust they will pardon our pointing out what appear to be several blemishes in it, our only object in so doing being the hope that the forthcoming work may thereby be rendered more perfect.

---

* We take this opportunity of saying, while remarking on the game-birds and wild fowl of North America (and the more so since an inquiry has been addressed to us on the subject by a correspondent in India), that the "Booming Swallow" mentioned by Lord Milton and Dr. Cheadle in their entertaining 'North-West Passage by Land,' is probably *Gallinago wilsoni*, or at least some Scolopacine species. The rapid and erratic flight of a cock Snipe in the breeding-season might naturally be ascribed by unornithological observers to a Swallow; and the drumming sound produced, as well, we believe, by the American as by the European species, might well give rise to the epithet by which these adventurous travellers distinguished it.

† The Naturalist in Vancouver Island and British Columbia. By John Keast Lord, F.Z.S., Naturalist to the British North American Boundary Commission. London: 1866. 2 vols, small 8vo.

We must first of all complain of what seems to us to be an extremely unnecessary innovation proposed by the authors. This is the inversion of the well-known and universally accepted meaning of the words *maxilla* and *mandibula* for the upper and lower portions of the bill respectively (p. 8, note 2). His fondness for entomological studies, in which he has achieved so great a reputation, has, no doubt, persuaded M. Mulsant to propose this alteration; but in reality it is very doubtful if there is any analogy, much less any homology, between the laterally-moving jaws of an insect and the vertically-moving mandibles of a bird, though even if such were the case it would hardly be sufficient reason for subverting what has been the practice of ornithologists for a century. It is also incumbent upon us, we think, to protest against the principle of changing the spelling of a name without regard being had to its derivation, but merely "pour en adoucir la prononciation," of which we have an example (p. 18, note) in the author's dropping the "m" from *Pygmornis*, and thereby entirely perverting the meaning of the term. What would M. Mulsant say if a similar liberty were taken with his own name, and the letter "l," for instance, suppressed to render its utterance easier to English lips?

---

* Essai d'une Classification Méthodique des Trochilidées ou Oiseaux-Mouches. Par E. MULSANT et JULES VERREAUX, EDOUARD VERREAUX. Paris. 8vo, pp. 98.

The value of a system is in its application; we will therefore examine a few of the genera adopted in this work, and we will take first *Leucolia*, Muls. & Verr. (p. 31). This genus contains *Dolerisca*, Cab., *Cyanomyia* (nec *Cyanomya*), Gould, *Leucippus*, Bp., and *Phlogophilus*, Gould, besides several species of *Thaumatias*, placed as if Mr. Gould had included them under *Cyanomyia*. The types of all these genera are included in the list of species forming *Leucolia*; surely, then, there was no need of inventing this additional name? The localities, too, of many of the species are wrongly assigned. *Dolerisca fallax* and *Cyanomyia quadricolor* are said to be from New Granada instead of from Venezuela and Mexico respectively; while *C. guatemalensis* (the *patria*, we should have thought, was sufficiently indicated by its name) is put down as coming from Mexico! *Thaumatias candidus*, too, is said to be from New Granada, which it certainly is not. We have also to inquire what has befallen the Peruvian *Cyanomyia cyanicollis* and the *Dolerisca cervina*, Gould (Introduction, p. 56)? Does M. Mulsant deny them specific rank, or have they accidentally escaped his notice?

As a further instance of the propriety of M. Mulsant's arrangement, we must mention that the two very closely allied birds *Erythronota edwardsi* and *E. niveiventris* are placed in different genera—the first in *Amazilia* (p. 35), the second in *Ariana* (p. 36), another new genus, the name of which should probably be correctly spelt *Ariadne*. Again, the very natural group *Panoplites*, Gould, is scattered to the winds; of the three species composing it, *P. jardinii* is placed in a subgenus (*Galenia*) of *Florisuga* (p. 47); *P. matthewsi* is included, with a host of other genera, in *Clytolæma* (p. 59); while *P. flavescens*—the type of the genus—constitutes by itself a genus upon which a new name, *Callidice* (p. 65), is bestowed!

Besides the two we have already mentioned, a considerable number of species seem to be wholly omitted. We have been unable to find *Heliomaster longirostris* and its allies. On the other hand, we have here and there new species inserted without any descriptions at all. Does not M. Mulsant know that, whatever may be the practice in entomology, the publication of MS. names without descriptions has always been regarded by ornithologists as the one unpardonable offence?

We have to notice the 'Mémoires Scientifiques' of M. François Pollen—a series of papers contributed to the 'Bulletin de la Société d'Acclimatation et d'Histoire Naturelle de l'Ile de la Réunion' and the 'Bulletin de la Société des Sciences et Arts' of the same island, one of which contains the description of a new Sparrow-Hawk from Madagascar, to which the author assigns the name *Nisuoides* (rectiùs *Nisoides*) *moreli*, founding a new genus for its reception. As, however, we understand that M. Pollen is preparing a detailed work on the ornithology of Madagascar and the Mascarene Islands, we forbear at present to say more on the subject, knowing that we shall have to return to it.

3. American.

The 'Proceedings of the Boston Society of Natural History' for the past year contain a list of birds from Porto Rico, presented to the Smithsonian Institution by Messrs. Swift and Latimer, drawn up by Dr. Bryant, in which three species, *Tyrannus antillarum*, *Todus hypochondriacus*, and *Tanagra* (*Spindalis*) *portoricensis*, appear to be described as new. The first is presumed to be the *Myiarchus* sp.? of Mr. E. C. Taylor's list (Ibis, 1864, p. 109), "and not unlikely the same as the Tobago Bird in Jardine's catalogue of the birds of that Island;" but our good friend is very chary of his references, and does not specify which of the three Tyrants mentioned by Sir William (Ann. & Mag. Nat. Hist. xx. pp. 329, 330) it is that he means, if, indeed, he means them at all,—a fact much to be regretted, as the circumstance of a species ranging from Tobago to Porto Rico, though not, we believe, unexampled, is worthy of note. Besides these three species, Dr. Bryant describes local varieties of several others, *Mimus polyglottus*, *Certhiola flaveola*, *Fringilla* (*Phonipara*) *zena*, *Icterus dominicensis*, and *Saurothera vieilloti*, each of which, except the last, distinguished as "var. *rufescens*," he designates as "var. *portoricensis*." These we believe to be the chief objects of interest in this paper; but we are by no means sure of it, as the author, having apparently no pity for reviewers or recorders, omits to lighten their labours by the usual and simple mode of indicating the novelties he introduces.

The same Journal contains also "A List of Vertebrates observed at Okkak, Labrador," by Mr. Weiz, with annotations by Mr. A. S. Packard. Unfortunately the latter do not extend to the Birds, of which consequently we have but a bare list of names of the species, which are confounded in many cases with their European representatives, though, as the editor justly remarks, "experts in American zoology will readily correct" such mistakes. The list shows the *Ornis* of Labrador to be much as might have been expected. Its most useful part is perhaps the information it gives as to the native (Eskimaux) names.

Mr. Lawrence continues his unwearied labours in elucidating the Central and South American avifauna, and, in a paper read to the Lyceum of Natural History of New York in June last and printed in their 'Annals,' describes seven more new species of birds from that region. These are *Campylorhynchus brevipennis* from Venezuela, *Automolus rufescens*, *Grallaricula costaricensis*, and *Eupherusa cupreiceps* from Costa Rica, *Grallaria gigantea* from Ecuador, *Phaethornis cassini* from New Granada, and *Geotrygon veraguensis* from Veragua.

From a paper of some considerable length in the 'Proceedings of the Philadelphia Academy' we are very glad to learn that our contributor Dr. Coues intends publishing a full account of the birds of the remote region where he was lately quartered, and of his journey to and from which he gave such an interesting description in the pages of this Magazine. "The Prodrome of a work on the Ornithology of Arizona Territory," as the separately printed copies of this paper are headed, is, however, in itself a very elaborate performance, and one which is entitled to the highest praise. But we must here be brief, and content ourselves with mentioning that Dr. Coues's notes refer to no less than 244 species*, of which four (*Mitrephorus pallescens, Vireo plumbeus, V. vicinior,* and *V. pusillus*) are now described as new, and a variety of *Chrysomitris mexicana* distinguished by the agnomen *arizonæ*. The first of these is the bird which the author in this Journal (Ibis, 1865, p. 537) provisionally called *Empidonax pygmæus*; and we must say we wish he had not thought it expedient to change its specific name, since his notice of it seems to us to have been sufficiently diagnostic. Dr. Coues also founds three new genera—*Micrathene* with *Athene whitneyi* as its type, *Asyndesmus* with *Picus torquatus*, and *Podasocys* with *Charadrius montanus*.

If the paper last noticed gives the result of Dr. Coues's labours in the field, the continuation of his "Review of the Family *Procellariidæ*" furnishes a renewed proof of the value of his studies in the closet. The first and second parts of this carefully worked-up paper, which by some mischance escaped notice in our pages, appeared in the Philadelphia 'Proceedings' for 1864; the third, fourth, and fifth portions are contained in the same publication for last year, and exhibit the same amount of patient investigation of this difficult family. The whole essay almost defies a reviewer to give within reasonable limits any satisfactory account of it. Perhaps for ornithologists in this country it may be most useful to mention that one of the results at which the author has arrived is, that the generic name *Thalassidroma* must be entirely suppressed, as being synonymous with *Procellaria* proper; and in its stead he proposes to use the term *Cymochorea*. Several new species of the group are described, and a great many rectificatious in the synonymy of those that are known are suggested. No person writing on the Petrels should fail to make himself acquainted with this paper.

4. AUSTRALASIAN.

It is with extreme pleasure that in these our notices of recent publications we have for the first time to appropriate a section to the works of our fellow labourers at the antipodes. No doubt in a few years we shall have a fine crop of ornithological papers springing from the seed sown throughout those flourishing communities; but at present the firstfruits are offered to us by Mr. Walter Buller, a gentleman whose name is indeed comparatively unknown among ornithologists, but whose 'Essay on the Ornithology of New Zealand'* obtained a Silver Medal at the Exhibition held in that colony two years ago. In this paper, apart from its general merits, of which we will not now speak, no less than nine new species belonging to one or other of the islands are indicated, and seven of them duly named and described by the author. These are as follows:—*Anthornis auriocula* from the Chatham Islands; *Gerygone assimilis, Mimus* (?) *carunculatus, Creadion cinereus, Nestor superbus* from "the alpine heights of the South Island;" *Rallus featherstonii* and *Podiceps hectori.* We have placed a mark of doubt after the generic name of the new so-called *Mimus,* because we deem it highly improbable that a member of that American form should be found in New Zealand; and the species will no doubt eventually be referred elsewhere. The discovery of a new *Nestor* is extremely interesting, and several specimens of it are said to have been obtained. One of the two birds not described in the paper before us is a large *Strix,* an inhabitant of the subalpine parts of the Canterbury province, where it appears to have been discovered, though not obtained, by Dr. Haast, in honour of whom it has been provisionally named *S. haasti.* The remaining undescribed bird is a *Lestris,* considerably larger than *L. antarcticus,* found by Dr. Hector in Dusky Bay. Mr. Buller gives, as might be expected, some interesting particulars of the different species of *Apteryx*; but no specimen of *A. maxima* seems yet to have gladdened the eyes of a colonist†. The number of New Zealand birds at present known to him is 133; "and there is every reason to believe that, as the country becomes more thoroughly explored, the list will be considerably augmented;" meanwhile, considering the rage for acclimatization, we fear the number will be considerably diminished. Even now Mr. Buller tells us that *Coturnix novæ-zelandiæ* is "fast disappearing," and is only met with in the unfrequented parts of the South Island, having become almost, if not quite, extinct in the North.

---

* 245 species are actually enumerated; but one, *Certhiola flaveola*, is, as we are kindly informed by Professor Baird, included by mistake.

---

* New Zealand Exhibition, 1865. Essay on the Ornithology of New Zealand. By WALTER BULLER, Esq., F.L.S. Printed for the Commissioners. Dunedin, Otago, N. Z.: 1865, 8vo. pp. 20.

† Mr. Buller's letter to Archdeacon Hadfield, printed in the 'Zoologist' for 1864, p. 9197, should not be overlooked by any one interested in the subject of the brevipennate birds of New Zealand.

The 'Proceedings of the Philosophical Society of Sydney' contain a paper, read on the 5th of July, 1865, by our contributor Mr. E. P. Ramsay, "On Australian Oology," which is illustrated by a plate admirably drawn by Miss Helena Scott, well known to entomologists as one of the artists of the 'Australian Lepidoptera,' and as admirably coloured. The species treated of are *Pomatorhinus temporalis, P. superciliosus, Xanthomyza phrygia, Ptilotis fusca, P. auricomis, Sisura inquieta, Eopsaltria australis,* and *Micrœca macroptera,* respecting the breeding-habits of all of which very full details, and figures of one or two specimens of their eggs, are given. Egg-seekers may wish that many more species would take the one last named as their model; for Mr. Ramsay says, "any one accustomed to birds' nesting can tell in a very short time whether the birds have a nest or not; and when this fact is settled, nothing is easier than to watch the birds until they go to it." The author gives, in the case of *Xanthomyza phrygia,* another instance of the peculiarity possessed by many Australian birds of occasionally absenting themselves for a time from a particular locality where they had before been abundant, and then visiting it again in immense numbers. It may be a tolerably safe conjecture to suppose that such irregular movements have relation to the plenty or scarcity of food; but the subject is one that would bear a good deal of investigation, and we doubt not Mr. Ramsay will give it his best attention whenever the opportunity offers itself again.

VIII.—*Letters, Announcements, &c.*

We have received the following letters, addressed "To the Editor of 'The Ibis:'"—

Dobroyde, New South Wales.

Sir,—After reading the paper on the supposed gular pouch of a male European Bustard (Ibis, 1862, pp. 107–127), I naturally felt a desire to investigate the subject with regard to the Australian species (*Otis australiana*), and I now send you the result of my inquiries.

In 1863 I took a trip for about a hundred miles inland, but, not being in the right locality, I did not meet with any birds myself. Mr. Griffin, of Braidwood, however, who has without doubt slain more Bustards than any one else in the district, informed me that he had purposely shot and examined numerous male birds without finding a trace of any pouch or water-bag. It was not until January 1865 that, having taken another journey expressly to ascertain the fact for myself, I had the opportunity of examining a bird. This specimen I procured in the neighbourhood of Goulburn. There was no sign of a pouch; but as the bird was not so large as many others I had seen in that locality, I did not consider it a fair trial, and set about procuring older and larger examples. In this I was disappointed, for I did not get another chance until during my last trip inland. Passing by Lake George, I was delighted to hear that some fine large birds were to be found on its borders. I consequently remained there a week, and on the first day, of course, I went after the Bustards. I found a pair among the tall reedy grass with which the upper portion of the basin is covered. They were very wary; but I succeeded in getting the largest, a male weighing 12 lb. and standing more than 3 feet high. This bird I carefully examined, but no pouch was to be found. Not being satisfied, however, I resolved to continue my researches still further, and I examined another specimen, one shot by my brother, Mr. James Ramsay, with a revolver; but as the ball had seriously injured the specimen, the result was unsatisfactory. Nor was it until my second visit to the lake, where I was determined to stay till I was quite satisfied, that I came to the conclusion that our Australian Bustard did not possess a gular pouch of any kind, having merely the power of greatly extending the gullet at pleasure. Having for several days chased a fine old male without getting a shot at him, I at last procured him, and found him to be by far the largest I had ever examined, weighing 20 lb. and standing 4 feet high. I carefully looked underneath and all round the tongue before separating the membrane from the sides of the lower mandible, and next morning began to skin him, carefully turning back the skin when I came to the neck, and afterwards separating the trachea, gullet, and so on from the body and head, taking in the tongue. I then washed and carefully examined it, inflating every part of the gullet with air, to see if there was any distention in any part of it, and I found nothing whatever approaching to a pouch.

I remain, &c.,

Edward P. Ramsay.

In continuation of my letter of last year (Ibis, 1866, p. 222), I may mention that there were again this spring two Hoopoes' (*Upupa epops*) nests in my verandah, and in the same place.

I find that the hens do leave the nest once or twice a day; but I have never seen them stay out longer than to give time to get rid of their droppings, and I have never seen either of them on the ground when out. Generally speaking they perch on a tree near at hand, and, after sitting a few moments for the purpose mentioned, fly back to the nest. Two or three times (once when Dr. Jerdon was sitting in my verandah) one of the hens flew out, passed her dropping whilst on the wing, and returned to the nest without having settled anywhere. They are fed most indefatigably by the cocks, and the number of grubs, small worms and so forth, destroyed by them is very great. Curious to say, I saw a Hoopoe killing a locust, which I hardly thought its bill capable of doing. Unfortunately it was disturbed, and flew away, leaving the insect dead on the ground, so that I had no opportunity of ascertaining how it would have managed to swallow such a large morsel.

Three young ones from one nest and two from the other made their appearance in due course, and I repeatedly saw the nine feeding together of an evening. But in the evening of the 11th inst. I saw no less than *twenty-one* Hoopoes feeding, within a space of thirty yards by ten, in the soft ground where the grass was still green, the whole of the rest of the soil in the neighbourhood being parched by the drought. Whilst the young ones were newly out of the nest they very often sat in the verandah, and I was struck by the shortness of their bills. The birds themselves are not very much smaller than the parents, whilst their bills appeared to me not above half the length. To the best of my belief the female during the time of sitting is entirely fed by the male, and is only off the eggs for a minute or two, and frequently not so long, once or twice a day for the purpose mentioned before.

There is a curious circumstance with regard to the King-Crow (*Dicrurus macrocercus*) which may be worth noting. I was returning from my morning ride on April 23rd, when I saw two King-Crows on the ground attacking something. Before getting near enough to see what it was, one flew up carrying what appeared to be a very large moth or butterfly, and, flying about a hundred yards, again settled on the ground. Before I got to it, it again flew; and as it had some difficulty in carrying its burden, I cantered up, and it then went off leaving its prey on the ground, which proved to be a fully fledged young one of one of the small Wren-Warblers. It was quite insensible, but did not seem particularly injured, and by the time I reached home was perfectly well; so I let it loose in my garden. What did the King-Crows intend doing with it? They kill and eat, I know, insects of almost all sizes, but certainly I never heard of their killing young birds.

Umballah, June 18th, 1866. D. Scott.

Simla, June 22nd, 1866.

Sir,—Very little seems to be known about the Choughs of the Himalayas. Dr. Jerdon admits two species—First, *Fregilus himalayanus*, Gould, which is closely allied to the Cornish Chough and has a red bill and legs.

His dimensions of this species are as follows:—

Long. tot.	alæ.	caud.	tars.	rostr. a fr.
15½ in.	12¾	6¾	2¼	2¼

A couple of fresh skins just sent in from the neigbourhood of Kotgurh give

A.	15½ in.	11¼	6⅜	1⅞	2
B.	15	11½	6⅝	1⅞	2

According to Col. Gott, a very good observer, this species is found near Simla on the range called the Tullowrie Tote on the further side of the Sutledge River; and the specimens I have just received are most likely from that locality.

The second species, *Pyrrhocorax alpinus*, Vieill., or Alpine Chough, is apparently identical with the European bird. I am not aware that Dr. Jerdon ever saw the Himalayan bird, at any rate *before* the 'Birds of India' was written, although perhaps he has since; but the description he gives seems applicable only to the European bird. He describes the legs as bright red, although the bill is yellow, and states that it feeds on the mulberry; but Col. Gott, who has shot several, thinks he is mistaken, and says his impression has always been that the legs are also yellow; and the testimony of his head man, a respectable native, who has seen numbers, is to the same effect. Although in a matter of this kind recollection is very apt to be deceitful, yet I think this is worth recording, so that it may be left an open question to direct future investigation.

Pyrrhocorax alpinus, Col. Gott states, is found near the snows, in particular spots, at a very much higher elevation than *Fregilus himalayanus*, and most certainly does not feed on the mulberry, since the tree does not occur in that part of the hills, nor could it flourish at the elevation at which these birds are found. He once only saw this species driven down by very severe weather as low as 10,000 feet. I have examined a European specimen of *P. alpinus* in Col. Tytler's collection, in which the bill has apparently been light yellow and the legs dark red; but I have not been able yet to get hold of a specimen of the Himalayan bird, although I hope to do so before leaving Simla.

I have not done very much amongst the birds here yet. Simla seems to bear no comparison to Darjeeling in the number of species of birds—I fancy, owing to the comparative want of vegetation here. The common species of the *plains*, unknown at Darjeeling, frequently occur here, such as *Neophron percnopterus*, *Milvus govinda*, *Acridotheres tristis*, and *Passer indicus*. At Darjeeling *P. montanus* is the only species; here it apparently does not occur, the only Garden-Sparrow I have hitherto seen being *Passer cinnamomeus*. The pretty Himalayan Siskin, *Chrysomitris spinoides*, is not rare; and earlier in the season a Rose Finch, *Carpodacus erythrinus*, was abundant, but it seems to have migrated since the weather became warm.

Picus himalayanus, *P. brunneifrons*, and *Gecinus squamatus* are the only Woodpeckers I have yet seen: the first is rare, but the second and third species are tolerably abundant. The Titmice are well represented by *Parus monticolus* (common), *Machlolophus xanthogenys*, Vig. (rarer), *Lophophanes melanolophus* (which breeds here), and that beautiful little red-headed Titmouse *Ægithaliscus erythrocephalus*. *Corvus intermedius* is the only Crow we have here, as far as I know; yet Dr. Jerdon's information regarding this species is very scanty; he does not even give its dimensions. I hasten to supply the deficiency from specimens shot by myself:—

	Long. tot.	alæ.	caud.	tars.	rostr. a fr.
A.	19 in.	11½	8	2	2¼
B.	19	12	8	2¼	2¼

Irides dark brown, bill and legs black.

This species has the habits of *C. culminatus*, but is decidedly smaller, with a proportionately longer tail. It has a peculiar habit, which I have not noticed in any other species of Crow, of soaring high in the air (generally of an evening) in circles, like the Kites and Vultures, frequently to an immense height.

Yours, &c.,

R. C. Beavan.

Simla, August 14th, 1866.

Sir,—It does not appear generally known that we possess a beautiful little cage-bird up here, which sings beautifully and is abundant, our Himalayan Siskin, *Chrysomitris spinoides*, Vigors. It puts me forcibly in mind of the English Greenfinch, *Fringilla* *chloris*, and in size is intermediate between it and the English Siskin; but its habits and notes generally are very similar to the Greenfinch's during its breeding-season. It has much the same kind of call, both in flight and when seated on the top of a tree, uttering in the latter instance the peculiar "bzee-ee" so characteristic a part of the Greenfinch's song. Both Col. Tytler and myself are very anxious to get some live specimens; and doubtless we shall succeed later in the year, as I hear that the soldiers at Subathoo manage to catch them in the winter months, at which time they probably descend to the lower elevation (about 4500 feet) of that station, driven down by snow. The song of our Siskin is a very sweet one; and I can only describe it by comparing it to that of the Greenfinch, interspersed with many of the notes of the Goldfinch—judging, that is, as well as I can from recollection. It is of course peculiar of its kind, and is continued for some length of time without intermission.

I am inclined to think that this species breeds about the beginning of this month; for during a two days' trip to a staging bungalow called Fagoo, distant some fifteen miles on the Himalaya and Thibet road, I came across large numbers, all, however, in pairs, frequenting the umbrageous pine (*Pinus excelsa*) and holly (*Ilex*) trees, which, except where partially cleared away for the cultivation of the potato, form a high and thick forest, and I shot a female in the act of collecting moss in its bill.

At the same place I procured several other interesting birds, which, though at such a short distance off, I had not previously obtained in the vicinity of Simla.

Two species of *Trochalopterum* not previously seen here were abundant, *T. erythrocephalum* and *T. variegatum*, but, like all the rest of their tribe, such intense skulkers amongst the low brushwood that I had some difficulty in procuring specimens. Several were seen of that rare Nutcracker, *Nucifraga hemispila*, which also were in pairs, and so excessively wary that I only succeeded in securing one, which I came upon suddenly. I fancy they are not nearly so rare on these hills, from what Col. Tytler tells me, as on the Darjeeling ranges, where in 1862 I only saw a single example of the species. It has a harsh, unpleasant, grating scream, which may be heard a long way off, and the bird occasionally seen flying from tree to tree, or soaring for a short distance in the air, and then alighting. A fine Black Eagle, *Neopus malaiensis,* fell to my gun, with a charge of No. 8 shot in it, as he suddenly swept round a hillside on which I was busily engaged looking for some Black Pheasants, *Gallophasis albocristatus.* I have previously seen this fine raptor in Sikkim, but never had the good fortune to get within gunshot of one before.

Two distinct species of Grosbeak formed an interesting addition to my bag. One was the large blue-billed *Mycerobas melanoxanthus,* and the other, of which I got fine specimens of both sexes, was *Hesperiphona icteroides.* Neither of them appear well known to science; I hope, therefore, at a future period to give a more detailed statement regarding them, merely noting *en passant* that the latter species is apparently far from uncommon, and feeds, I presume, on the cones of the pines. The stomach of a male which I examined had it full of the white kernels of some seed. They have a loud, plaintive, trolling call, uttered generally from a high pine tree, the female being apparently more wary than the male, and wanting his conspicuous black and yellow plumage.

Yours, &c.,
R. C. Beavan.

Simla, September 18th, 1866.

Sir,—Dr. Stoliczka, a Polish gentleman, attached to the Geological Survey of India, has lately arrived here with a fine collection of some 300 specimens of birds collected in Spiti, Ladak, and the neighbouring hill states. Perhaps the best thing he has, or at least the greatest novelty to me, is a young *Neopus malaiensis,* Reinwardt, in a phase of plumage never before, I believe, recorded:—Beneath, entirely dark brown, like the under parts of *Milvus govinda,* each feather black-shafted; the top of the head rufous (the feathers also black-shafted); a conspicuous shoulder-spot of a pure white; primaries of wings black; secondaries and tertiaries dark brown, their coverts being broadly margined with ashy-grey; tail the same. The upper back is dark brown, with here and there a purplish gloss legs dark yellow, with black claws; bill horny; cere yellow. This specimen cannot have long left the nest, judging from the but partial development of the tail. The other good things in his collection were:—both sexes of *Metoponia pusilla*, Pallas; *Emberiza cia* vera (as distinguishable, according to Col. Tytler, from that common about Simla), and agreeing with the European type; *Emberiza fucata* and *E. pusilla*, both sexes of each. May not the Simla *Emberiza* be the *E. cioides* of Temminck mentioned by Dr. Jerdon (B. Ind. ii. p. 372) as "recorded by Adams to be common in the lower ranges of the N.W. Himalayas"? *Propasser rhodochrous*, only a pair. I have observed several flocks of these birds about Simla lately, probably on their autumnal migration; they are called "Tooti" by the natives; but that name more properly applies to the *Carpodacus erythrinus* of the plains, which I do not now think ever occurs so high up as this. I have endeavoured to snare specimens, but hitherto without success.

Chrysomitris spinoides. Dr. Stoliczka tells me that this beautiful Siskin is found in great abundance all over the hills of the intorior. I have been successful in capturing some twenty here with the view of caging them to take to England, where they will doubtless be much prized. I see that in Dr. Hoffmeister's 'Travels,' published in 1848, they are mentioned as the "Himalayan Canary." They are soon reconciled to captivity, and are exceedingly lively and sprightly in all their movements, resembling the Goldfinch in this respect. The young bird, by the way, of which Dr. Stoliczka has specimens, though none have yet turned up here, is somewhat dully coloured, like the female, but has the breast longitudinally striated with dark brown. (I write this from memory, and subject to correction.) Dr. Stoliczka has also several specimens of the female and young of that elegant little blue Flycatcher *Muscicapula superciliaris*. Though the species is abundant about Simla, and I had myself found a nest with young ones in it in the hole of an old oak tree on the 10th of May, and at that time seen the female, I had not previously had the opportunity of examining a specimen of that sex closely, owing to the strictly enforced rule which prevails here preventing any shooting within the limits of the station (the boundaries of which, owing to the scattered nature of the houses, extend several miles), and thus effectually putting a stop to my *personal* bird-collecting propensities.

Of Bullfinches he had only a pair of *Pyrrhula erythrocephala*. Several examples of *Alsocomus hodgsoni*, which I had previously only obtained at Darjeeling, and which does not apparently occur in the immediate vicinity of Simla, though common in the interior.

The other Gemitores are *Turtur rupicolus*, *T. humilis*, and *Columba rupestris*.

Dr. Stoliczka has observed *Phyrrhocorax alpinus*, and *thinks* it has a yellow bill with red legs, like the European bird; but this is a point which requires further evidence to settle satisfactorily, as well as other opinions relative to this rare bird. He had a few specimens of *Fregilus himalayanus*.

Of *Nucifraga hemispila* several specimens occur in the collection; but of the rarer *N. multimaculata* it appears the Doctor has only procured one, and that last year in Cashmere. Of the former I have occasionally seen a pair, within the last few days only, in this neighbourhood (Simla) above Annandale. They probably visit the woods here in the winter months only in any numbers, although a few may venture about this month, attracted to the neighbourhood by the half-ripe walnuts, of which they are very fond, and the kernels of which they scientifically extract, after boring a good-sized hole through both skin and shell with their powerful beaks.

Hypotriorchis severus and several young of *Tinnunculus alaudarius* are the only Hawks; of Owls, *Glaucidium brodiei*; of Swallows, only one species, which is common here in the summer, *Hirundo daurica*. *Palæornis schisticeps* is the only Parakeet.

Cuculus himalayanus and *C. poliocephalus*, the Cuckoos; of the true identification of the latter I am not, however, quite satisfied without comparison. A Honeysucker is *Æthopyga gouldiæ*; of *Myzanthe ignipectus* fine specimens of both sexes. The female is very like the females of *Dicæum*. A creeper is the common *Certhia himalayana*—a very abundant species in these hills, which breeds in the vicinity of Simla in May and June.

Upupa epops is apparently not uncommon in the interior, although rare about Simla; and Col. Gott tells me it extends upwards of two hundred miles from this in the hills, and up to an elevation of 14,000 feet.

Of Thrushes, *Oreocætes erythrogastra*, *O. cinclorhynchus*, *Myiophonus temmincki*, of course, and several examples of our Himalayan Mistletoe Thrush, *Turdus hodgsoni*. About Simla the first of these is found only on Jacko, whilst its congener (the second) only lives apparently some 2000 feet lower down. *M. temmincki* is very abundant here; but I have not seen the Mistletoe Thrush nearer than Fagoo (fifteen miles). The Blackbirds in the collection are *Merula boulboul* and *M. albocincta* (?).

Of *Timaliinæ*, *Trochalopterum variegatum* and *T. erythrocephalum*, the Variegated and Red-headed Laughing Thrushes, both of which occur within sixteen miles of Simla, although neither appears to frequent the immediate vicinity. Space forbids me to say more; but there are many other interesting species in Dr. Stoliczka's gatherings, which I am not now able to mention.

Yours, &c.,
R. C. Beavan.

---

41 Portman Square, London,
November 27th, 1866.

Sir,—While staying in Rosshire lately an occurrence happened which I imagine to be very unusual and sufficiently interesting to be recorded. My friend Mr. John Bateson was in the forest one misty day in October and found a freshly killed Falcon (*Falco peregrinus*), and all round it were quantities of Grouse's feathers. The Falcon had a bad wound on its back like the mark of an Eagle's talon; and the forester, who has lived all his life among Eagles and Deer, said he was sure that it was so, there being no other animal but an Eagle that could have made such a mark. He added, however, that he had never seen or heard of such a thing before. Golden Eagles (*Aquila chrysaetus*) constantly frequent the place, and I myself saw them at different times. I conclude that the Falcon had killed the Grouse and was intent upon eating it, when the

Eagle seized her from behind, killed her, and went off with the game.

I am, sir, your obedient servant,
H. J. Elwes.

Maxton, Dover, January 5th, 1867.

Sir,—*Notornis mantelli*, which some years ago, when the first live specimens were introduced to public notice, was supposed to be nearly extinct, is still numerous in some districts on the west coast of the Middle Island of New Zealand. The discovery in 1865 in that region of rich gold-diggings has brought about an indefatigable rummaging of hundreds of miles of wild solitudes, chiefly mountains, densely covered with timber, the echoes of which never before awoke to the human voice; and parties of wandering "prospectors" have not unfrequently had to subsist for days on their captures of the great "Ground-Parrot," as *Notornis mantelli* is called in that quarter by those who came upon it without having any previous notice of its existence. The district forms a break-weather against the impetuous deluging gales (chiefly south-westerly) which are prevalent in that latitude a great part of the year, and is the stormiest and dampest in New Zealand; but, the country being very much broken and wooded, shelter is abundant.

Living examples of *Notornis* have only been found on the western side of the Alpine range which divides the Middle Island, and, so far as I can learn, only in the southern half of that region. Although the whole of the North Island, except some mountain and forest tracts, became occupied by the Maories, only the north and east parts of the Middle Island were peopled, and the mountains and forests of the west coast remained generally a solitude. There is abundant evidence to show that extensive tracts of the pasture-land on the east coast were formerly covered with heavy timber, which was burnt off. The circumstance that the region in which *Notornis mantelli* still occurs was not subjected to the ravages of bush-fires or to the occupation of man may partly account for its continued existence there.

Prospectors who had been exploring in the district mentioned informed me that *Notornis* is very easily caught by dogs. But dogs which run wild in the neighbourhood of the Maori habitations do not appear to have extended their range to the south-west portion of the island, where *Notornis* is found. Its immunity hitherto from the attacks of the wild dog in its local habitat seems, in connexion with the causes of repression specified, to explain its rather peculiarly limited range at the present time.

Strigops (the "Ground-Parrot" proper), though incapable of taking wing, has, in its climbing-powers, the means of preserving itself from extermination by dogs, and is still found nearer than *Notornis* to the haunts of the wild dog. The "Weka" (*Ocydromus*), another of the New Zealand "ground-birds," is still nearly universal there; but by means of its agility and speed of foot and its comparatively small size, which favours it in eluding pursuit in dense jungle, it can successfully defy dogs in scrubby and flax-covered country, although it cannot climb. Its large size, slow speed, and incapacity for flying or climbing render *Notornis* peculiarly liable to extermination by dogs in districts occupied by them. If the gold-diggings be found to extend over the south-western portion of the island, the diggers, and especially the dogs, will be likely very soon to increase the rarity of *Notornis*, if not to exterminate it altogether.

I am, &c.,
D. MACKAY.

Museum, Haslar, January 3rd, 1867.

SIR,—In 'The Ibis' for October 1866, in Mr. Blyth's Commentary on Dr. Jerdon's 'Birds of India,' it is stated (p. 343) that "all the various forms of *Cuculidæ*" have cæca. Now in *Chryscoccyx cupreus* I find them absent, and the sketch I enclose (which is a copy of an original one I made some years since) will show there is no vestige of them. I found the gizzard to contain the hairs of caterpillars, as in our common Cuckoo.

I wish also to remark on a statement or two in Prof. Owen's second volume of 'Comparative Anatomy,' which is briefly noticed in the same Number. At p. 170 of his book the author states cæca are deficient in the Lark; now in the Sky-Lark (*Alauda arvensis*) I find them well developed and measuring a good eighth of inch in length. At p. 171 he also states that the cæca in the Peacock "measure each about one foot in length;" I find them to measure $5\frac{1}{2}$ inches in length. I have repeatedly found discrepancies between the measurements taken by myself and those given by others, and there are many instances in which Prof. Owen's measurements do not agree with my own; yet I have not selected these examples to show that Prof. Owen and Mr. Blyth are wrong, for I am not unmindful of the case of the travellers and the Chamæleon.

I am, sir, your obedient servant,

CHARLES BARRON.

Mr. Edward Newton informs us that, having been unable to obtain the assistance of labourers in Rodriguez, he sent thither from Mauritius a party of men to dig in the caverns where the Solitaires' bones had been found (*cf.* Ibis, 1865, p. 551). The expedition proved successful, the result being that he has obtained a very large number of the bones of *Pezophaps solitarius*, including all the most important parts of the skeleton, so that we hope naturalists will soon be as well acquainted with the osteology of this species as they now are with that of its ally *Didus ineptus*.

At a recent sale in London, by public auction, an unbound copy of the First volume of the old series of 'The Ibis' fetched *upwards of Three Pounds*. Our readers are aware that this volume has long been out of print; perhaps a knowledge of the fact just mentioned may induce possessors of copies to offer them for sale, and so enable some of our newer subscribers to complete their sets.

END OF NO. IX.

THE IBIS.

NEW SERIES.

No. X. APRIL 1867.

IX.—*The Ornithology of India.—A Commentary on* Dr. Jerdon's '*Birds of India.*' By Edward Blyth, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc.

[Concluded from p. 48.]

To one of the characters of the order *Gemitores*, or Pigeons, as given by Dr. Jerdon (vol. iii. p. 442), "bare portion [of the tarsus] is covered with scutellæ in front," the genus *Goura* constitutes a prominent exception.

771. Treron nipalensis (Hodgs.); Bonap. Icon. Pig. pl. viii.

Very common in Borneo, as identified by Dr. Sclater (P. Z. S. 1863, p. 220).

772. Crocopus phœnicopterus.

The Siamese race referred to this by Schomburgk (Ibis, 1864, p. 249) is the nearly allied *C. viridifrons*, nobis.

775. Osmotreron malabarica.

The male of this bird is figured by Bonaparte (Icon. Pig. pl. xii.); but his supposed female (pl. xi. fig. 2) is that of the next species.

776. Osmotreron phayrii bears a nearer resemblance in colouring to *Treron nipalensis*, as the male has the same ochreous patch on the breast, which does not occur in *O. malabarica*.

777. OSMOTRERON FLAVOGULARIS; *O. pompadora*, Bonap. Icon. Pig. pl. xi. fig. 1, ♀.

Perhaps this is the true *Columba pompadora* of Gmelin from Ceylon, founded on plates 19 and 20 of Brown's 'Illustrations of Zoology' (1776), copied from native drawings. Both figure and description, however, represent the back of the male as being green instead of maroon like the rest of the mantle; and it is also described as "smaller than the Turtle-Dove;" so that a Cingalese species of the same diminutive size as *O. olax* of the Malay countries may yet remain to be rediscovered. The late H. E. Strickland was disposed to identify *O. malabarica* with *O. pompadora* before either *O. phayrii* or *O. flavogularis* had been discriminated. In like manner, Mr. Layard identified *O. flavogularis* with *O. pompadora* when he first obtained it; and he remarks that its voice "is very like that of *T. bicincta*" (Ann. & Mag. N. H. 1853, xi. p. 303). It may be remarked that Brown represents the crown of both sexes of his bird to be "blue" (*i. e.* slate-coloured, as in *O. phayrii*), the cheeks white, and the lower tail-coverts of the male to resemble those of the female (as in *O. flavogularis* and *O. chloroptera*), not cinnamon-coloured as in the males of most species of the genus (including *O. phayrii* and *O. malabarica*).

778. SPHENOCERCUS SPHENURUS (Vigors); "*S. cantillans*, Blyth;" Bonap. Icon. Pig. pl. v.

779. SPHENOCERCUS APICAUDUS (Hodgs.); Bonap. Icon. Pig. pl. iv.

Bonaparte (Comptes Rendus, xliii. p. 833) refers to a "*S. phasianellus*, Blyth." I know of no such species.

780. CARPOPHAGA SYLVATICA.

Mr. Gould gives this species as *C. ænea* from Tavai (P. Z. S. 1859, p. 150). *C. pusilla*, nobis, from Malabar proves to be a good species, or race of constantly smaller size.

781. CARPOPHAGA INSIGNIS (Hodgson).

The *Columba badia* of Raffles from Sumatra is a well-distinguished race.

782. ALSOCOMUS PHŒNICEUS.

To the same minimum division must be assigned *Columba* (*Carpophaga* !) *ianthina* of the 'Fauna Japonica' (*Aves,* tab. lx. c).

784. PALUMBUS CASIOTIS, Bonap.; *Columba palumbus,* Adams, P. Z. S. 1859, p. 187.

The figure of *P. casiotis* by Pr. Bonap. (Icon. des Pigeons, pl. lviii.) represents a much darker-coloured bird than that of the North-western Himálaya.

785 and 786. PALUMBUS PULCHRICOLLIS and P. ELPHINSTONII.

The Siamese Pigeon indicated by the late Sir R. H. Schomburgk (Ibis, 1864, p. 250) would seem to be an unnamed species of this form. *P. pulchricollis* is found eastward as far as Formosa (Ibis, 1866, p. 396).

788. COLUMBA INTERMEDIA, Strickl.; *C. œnas,* Burgess, P. Z. S. 1855, p. 34; *C. livia,* Adams, P. Z. S. 1859, p. 187.

"In the usual localities all over the Cashmere ranges" (Adams, *ut suprà*). Frequently seen associating with *C. leuconota.*

789. COLUMBA RUPESTRIS, Pallas; Bonap. Icon. Pig. pl. 75; *C. livia,* var., A. L. Adams, P. Z. S. 1859, p. 187; *C. leucozonura,* Swinhoe.

"Abundant on the rocky banks of the Dras river, Ladakh. I saw this bird nowhere else" (Adams). North China and Mantchuria (Swinhoe).

790. COLUMBA LEUCONOTA.

"Gregarious; common in certain sequestered mountain-valleys on the northern Cashmere ranges. Seen often with *C. livia* [*intermedia*], feeding in fields in the Wurdwan Valley; it was met with in Ladakh on one occasion." (A. L. Adams, P. Z. S. 1859, p. 187.)

792. TURTUR RUPICOLA.

The Himalayan bird resembles *T. auritus* except in being much larger; and it is doubtless the *T. auritus* from the Alpine Punjâb of Mr. Vigne's list (P. Z. S. 1841, p. 6). The more eastern form (*Columba gelastes,* Temm. Faun. Japon. *Aves,* tab. lx. B) has the lower tail-coverts greyer. In *T. meena* the latter are dark ash-colour. This last species I obtained in the interior of Martaban, near the Shán frontier. *T. rupicola* must be the species (no. 155) described by Dr. Adams (P. Z. S. 1859, p. 187) as "common in certain localities on the Cashmere ranges and Ladakh; plentiful likewise to the east towards Simla. Frequents grassy mountain-sides or valleys in the lesser ranges." It is certainly common near Simla; and it is the *T. orientalis* of Capt. T. Hutton, who states that it is "a mere summer visitant at Mussooree, where it arrives early in April, when every wood resounds with its deep-toned cooing. It is not found lower than 6000 feet with us, and departs in October" (J. A. S. B. xvii. pt. 2. p. 13). But what is Dr. Adams's *T. orientalis* (Lath.), no. 153, which occurs "in fields and cultivated districts in Cashmere and Ladakh"?

794. Turtur cambayensis.

This Dove, in India, assuredly does not evince the partiality for date-palms manifested by the barely separable *T. ægyptiacus* in North Africa, as observed by Mr. Tristram (Ibis, 1860, p. 69).

795. Turtur suratensis.

Dr. Jerdon erroneously identifies *T. chinensis* (*Columba chinensis*, Scopoli; *C. risoria*, var. *β*, Latham), founded on the "*Tourterelle de la Chine*" of Sonnerat, by whom it is correctly figured, with *T. tigrinus* (Temm.) of the Indo-Chinese and Malayan countries. The former is distinguished by its considerably larger size (having the wing and tail respectively 6 inches long), by the deep ash-colour, instead of white, of its lower tail-coverts, and especially by having the back and wings plain unspotted dark brown, with merely a slight tinge of grey at the bend of the wing, the spotting of the nape being precisely similar. *T. tigrinus* differs from *T. suratensis* only in wanting the two conspicuous pale spots at the extremity of each feather of the mantle; and I have seen no intermediate specimens. *T. chinensis* has a distinguishable note; but I remarked no difference of voice in the Indian and Burmese races. I have had the *T. chinensis* in captivity, sent me by Mr. Swinhoe*.

---

* In 'Ibis,' 1864, p. 252, for *suratensis* read *tigrinus*.

796. TURTUR RISORIUS.

The note of the wild Ringed Dove (or "Collared Turtle-Dove") of India is very different from that of the common caged race, which is also smaller, contrary to what is usually seen in domestic races. In captivity the two interbreed readily, and produce a fertile race, which is intermediate in note as well as in size and colouring. At least it is not constantly true that the hybrids between the domestic Ringed Dove and *T. auritus* are infertile *inter se,* as stated by Degland (Orn. Eur. ii. p. 11). Mr. Bartlett informs me that a man in London formerly bred numbers of them. Of several kindred wild races, I do not know one that can be satisfactorily assigned as the true origin of the common cage-bird. How about that inhabiting Asia Minor (Ibis, 1864, p. 410), which is said to be identical with the wild Indian race? There are several wild races (J. A. S. B. xxiv. p. 261), to which should perhaps be added *Streptopelia barbara* of Antinori (Catalogo &c. p. 89), if different from *T. semitorquatus,* Swainson. The voice should assist in the determination.

797. TURTUR HUMILIS ranges to China and Formosa. It is remarkable among the Doves for the sexual difference of colouring, the female being doubtless the supposed smaller race of *T. risorius* referred to by Major Franklin (P. Z. S. 1832, p. 122).

798. CHALCOPHAPS INDICA.

No. 156 of Dr. Adams's list (P. Z. S. 1859, p. 187) is doubtless this species. It was obtained by the late M. Mouhot in Cambogia.

800 and 802. PTEROCLES FASCIATUS and P. EXUSTUS.

The eggs of both these species are figured in P. Z. S. 1855, *Aves,* pl. 78.

801. PTEROCLES ALCHATA has bred in the Zoological Gardens. Two eggs were produced, from one only of which the chick was excluded alive. When first hatched it is very Plover-like—*præcox,* of course, but inactive, on account of its short legs. It has been figured (P. Z. S. 1866, pl. ix.).

803. PAVO CRISTATUS.

This species, and not *P. nigripennis,* is the Peafowl of Ceylon, also that of Asám, and of Chittagong. The range of the Greennecked Peafowl (*P. muticus*) begins with Arakan, and the dark Arakan race extends southwards through the Tenasserim provinces. In Penang (and, I presume, also in Java) it is much more vividly coloured. In the opinion of Mr. Wallace, *P. muticus* does not inhabit the Malayan peninsula; and he thinks that the Malays have no name for it. The late Dr. Cantor, however, had skins which he told me were from Province Wellesley; and Sir. T. S. Raffles (mistaking the species) remarks that "the common Peacock (*M'ra* or *Marak*) is a native of the Malayan peninsula and Java, but is not common near Bencoolen" (Tr. Linn. Soc. xiii. p. 319). In the list of the animals of Sumatra, prepared by Vigors and appended to Lady Raffles's memoir of her husband, *P. muticus* is assigned both to Sumatra and Java, and *P. cristatus* to the former only. It may be that Raffles saw both species in a state of semi-domestication, the Indian Peafowl being unquestionably an importation, like the Axis-Deer, which he also mentions.

With reference to the affinity of *Menura* (vol. iii. p. 494), putting aside its truly passerine anatomy, habits, and song-notes (with highly imitative propensity), the nest of *M. alberti* figured by Mr. Gould (P. Z. S. 1853, *Aves*, pl. 53) might suffice to decide the question.

804. LOPHOPHORUS IMPEYANUS.

Egg figured in P. Z. S. 1858 (*Aves*, pl. 149. fig. 5), and chick (*ibid.* pl. 148. fig. 2).

808. PUCRASIA MACROLOPHA.

Egg figured in 'Contributions to Ornithology,' 1850, pl. 57.

The *Tragopan duvauceli*, Temm. (Pl. Col. 545), represents *P. castanea*, Gould; and the specific name holds precedence. *P. nipalensis*, Gould, is less satisfactorily distinguished, and may prove to be a hybrid race between *P. duvauceli* and *P. macrolopha*. A good third species, however, has been sent from North China, the *P. xanthospila*, G. R. Gray (P. Z. S. 1864, p. 259, pl. 20). A supposed female of *P. macrolopha* in the Calcutta Museum is in perfect male attire, the sex being presumed from its size and the absence of spurs; there is a similar specimen in the India Museum; and I have seen others. Numerous examples sent by Mr. Hodgson from Nipâl differ in no respect from the race of the North-western Himalaya; and the occurrence of the presumed hybrid (*P. nipalensis* of Gould) would indicate that the habitat of *P. duvauceli* is contiguous, the alleged habitat, Káfiristân, being, of course, quite out of the question*. It is more likely the "species very common in the jungles and woods of Cashmere, which," remarks Dr. Adams, "I have not examined and am inclined to consider different from *P. macrolopha*. Its crow is like that of the domestic cock, but not so prolonged [*i. e.* that of *Gallus ferrugineus ferus*]. The valley of the Duchinpara and surrounding ranges of the Northern Pinjal are its favourite and particular localities" (P. Z. S. 1859, p. 186). I have already (Ibis, 1865, p. 28, note) mentioned the true form of crest in this genus, so utterly misrepresented in Mr. Gould's and other published figures; but when the sincipital tufts are not erected (as also in *Phasianus colchicus*), they lie recumbent, as in Hardwicke's published figure (Ill. Ind. Zool.), which, no doubt, was taken from the living bird.

809. Gallophasis albocristatus.

Eggs of this bird and of *G. melanonotus* and *G. horsfieldi* are figured in P. Z. S. 1858, *Aves*, pl. 149, and chicks of the first two in the preceding plate. The *Lophophorus cuvieri*, Temm. (Pl. Col. v. pl. 1), represents one of the hybrid race referred to, between *G. lineatus* and *G. horsfieldi*. These completely pass one into the other in the province of Arakan, whence some living specimens have been received by the Zoological Society. In like manner *G. albocristatus* and *G. melanonotus* interbreed in the intermediate province of Nipâl, *G. melanonotus* being the species inhabiting Sikhim and Butan, where most assuredly *G. lineatus* is unknown, the latter inhabiting southward of the range of *G. horsfieldi*, *i. e.* in Pegu and the Tenasserim provinces, where I have personally observed it in the forests†. According to Dr. A. L. Adams, *G. albocristatus* is "rare on the Cashmere ranges; more plentiful on those near the Punjab. This and *Pucrasia macrolopha* are not seen in the same localities. Both are common on certain ranges about Simla,—the *G. albocristatus* low down, while the *P. macrolopha* inhabits the oak and pine forests at higher elevations on the same ranges" (P. Z. S. 1859, p. 186).

---

* For what exceedingly little is known of the fauna of Káfiristân, if that be not much too strong an expression, *vide* J. A. S. B. xxviii. p. 332.

† Specimens of *G. lineatus* in the British Museum are labelled from Butan, as also several Tenasserim species of *Sciurus*, as *S. atrodorsalis* &c.

812. Gallus ferrugineus.

Of the wild Common Fowl Dr. Jerdon remarks, "ear-coverts white." He means the white cheek-lappets, which are all but constant in the Indian bird, and much improve its appearance. In the Burmese race the ear-lappets are crimson, like the comb and wattles; and these, by the way, are small in the hen, not "wanting," as Dr. Jerdon strangely asserts. The Jungle-fowl mostly droops the tail, and has quite a different bearing from that of the domestic races—more Pheasant-like. The outline of Mr. Gould's figure of *Euplocamus vieilloti* (B. As. pt. iv.), copied from life, is exactly that of the wild Common Fowl. I have seen the cock strut forth most proudly and majestically, with remarkable grace of action; and the rapidity of movements of those in the Zoological Gardens must have struck the attention of many observers. A not very good figure of the cock *G. sonnerati* is given in illustration of a paper by M. Sacc (Rev. Zool. 1862, p. 11, pl. 3): and the cock *G. stanleyi* is figured by M. O. des Murs (Icon. Orn. pl. 18); but the comb and wattles are represented red and shrunken, instead of yellow with a red edge! Otherwise the figure is tolerably good; and both of these plates give the true Pheasant-like contour of the different wild Jungle-fowl. The hens of *G. ferrugineus*, *G. stanleyi*, and *G. varius* are figured together in one plate by Gen. Hardwicke (Ill. Ind. Zool.)*. The Indian *G. ferrugineus* I have found most difficult to tame if captured when adult—far more so than *G. sonnerati* and *G. stanleyi*, or, indeed, than any other game-bird that I have had experience of; not so the Burmese race, which is more Bantam-like in appearance, and has a somewhat coarser leg. This coarseness of the leg is greater in all the domestic races; but it is not observable in domestic Peafowl, Turkeys, and Guinea-fowl, as compared with the wild birds of the same species*. In localities where the Bengal Jungle-fowl is common, I have sought in vain for any traces of intermixture of its blood among the domestic poultry bred abundantly in the neighbouring villages, and which are left pretty much to find their own food in the adjacent jungle. In Burma, on the contrary, such intermixture is commonly observable, so that the wild and tame poultry fairly grade into each other; but I never saw the wild bird with legs more or less greenish or even yellow, as are or were some of the birds in the Zoological Gardens. Among the Kárens I have come upon tame Jungle-fowl hatched and reared by domestic hens; and the difference of their manner from those of ordinary fowls, their companions, was strikingly conspicuous: they would rapidly creep under cover at sight of a stranger; and I observed that they preferred roosting upon trees to taking shelter with the other poultry. The Malayan race resembles the Burmese; but the cocks are considerably deeper and redder in colouring: and the range of this race is noticed by Mr. Wallace to extend to Lombok and Timor; it is said also to inhabit the Philippines. In Irwin's "Memoir on Afghanistan" (J. A. S. B. viii. p. 1007) it is stated that "the common fowl is found in its wild state in the whole of Turkestân, especially Balkh." Surely this is a mistake! In the Asiatic Society's Museum at Calcutta there is a Bengal Jungle-hen with well-developed spurs.

---

* In the hen *G. stanleyi* the small comb and wattles are wholly yellow.

The very extensive distribution of the Common Fowl in its wild state contrasts remarkably with the limited range of *G. stanleyi*, which is confined to Ceylon, as *G. sonnerati* is to the peninsular portion of India. The *G. sonnerati* of the list of hill-birds given in Royle's 'Himalayan Botany' refers, of course, to *G. ferrugineus*, which occurs up to about 4000 feet elevation, the name "jungle-fowl" (doubtless supplied by Royle) having been translated as *G. sonnerati*! However the voice may vary in the multitudinous races of domestic fowls, it is only by modifications of the same note, being essentially different from that of *G. sonnerati* or the dissyllabic note of *G. stanleyi*. I have remarked the shedding of the nuchal ruff after the breeding-season, and its replacement by short blackish feathers, both in *G. ferrugineus* and *G. sonnerati*, as also in some domestic chanticleers. *G. temmincki*, Gray (P. Z. S. 1849, pl. 7 & 8), I consider to be most decidedly a hybrid between *G. varius* and the Domestic Fowl, as is likewise the *G. æneus*, Temminck, the hybrid varying according to the breed or colouring of its domestic parent.

---

* For remarks on the domestication of the Turkey and the Guinea-fowl, *vide* J. A. S. B. xxix. p. 387 *et seq.*

There surely is no fact more encouraging to the promoters of acclimatization than that the Common Fowl, which is indigenous to some of the hottest parts of Asia and its islands, should now be so generally diffused (in its domestic state) over the world, being reared even within the Arctic circle. The same remark applies almost as strongly to the Indian Peafowl. Indeed it would seem that all of the typical *Gallinaceæ* are disposed to thrive in temperate climates, requiring little or no protection from the weather (unless at night) so long as they are adequately supplied with food. But the Himalayan Pheasants do not live long in captivity in the warm plains of India. I suspect that the different Jungle-fowls would prove as hardy as the common Pheasant if turned loose into English woods. They have a vigorous flight when they do rise, and show to much advantage on the wing*.

"Fowls are found wild in the unfrequented parts of the island of Tahiti, which appear to be specifically the same with [*i. e.* similar to] those held in a state of domestication by the natives at the time of their discovery by Europeans, and continued to the present day" (T. R. Peale). "The cock domesticated in the Philippine Islands, and (as was ascertained by the naturalists of the Exploring Expedition in the 'Vincennes' and 'Peacock') in the island of Tahiti also, is the nearest approach to the Jungle-cock of India (*G. bankiva*) of any of the numerous domestic varieties that have come under our notice. It appears, in fact, to be quite unmixed with any other species [domestic race], and differs only from the parent bird in being of larger size, and in having the comb larger and more deeply serrated. All the colours are very nearly completely identical" (Cassin, in 'Ornithology of Wilkes's U. S. Exploring Expedition,' p. 190). Figures are given by Mr. Cassin of the heads of the Tahitian bird and *G. ferrugineus* (*ferus*), respecting which I have to remark that the true form of comb in the wild bird is that of the figure of the Tahitian! The comb and wattles assigned to *G. ferrugineus* are dry and shrivelled, and the former is not of the usual form behind. I never saw a Jungle-fowl's comb like it. The Tahitian bird is probably, like many domestic fowls which I saw in different parts of Burma, hardly removed from the wild type. It is curious that the red English game-cock is bred back nearly to the aboriginal form, though considerably larger; while the Indian game-fowls have a coarse leg and a distinguishing "pearl-eye." Lastly, I would call attention to the fact that the fowls sculptured on the Lycian Marbles in the British Museum are true Jungle-fowl in appearance, like those domestic races of Burma, the Philippines, and Tahiti which I have been considering.

---

* The Burmese Jungle-fowls loose about the Zoological Gardens in the Regent's Park have withstood the past severe winter (1866–67) remarkably well, without any special protection being accorded to them. I am told they always roost high upon the trees at night. Sonnerat's Jungle-fowl proves to be less hardy, though a few have survived without shelter.

814. GALLOPERDIX SPADICEA.

I have seen this species from the Oudh and Gorrukpore *tarai*. The genus appears to me to be the Indian representative of *Polyplectrum*, and by no means to be so nearly akin to *Gallus* as Dr. Jerdon considers it. Compare more especially the females of *Polyplectrum* and *Galloperdix*—and, again, that of *Ithaginis*, which assuredly comes nearer to *Galloperdix* than aught else (it being the Himalayan or mountain form of the same group). Or compare the living *Polyplectrum* and *Galloperdix* in the Zoological Gardens. The new *P. germaini*, D. G. Elliot (Ibis, 1866, p. 56), of Cochin China, appears even to have the cheeks crimson, like the species of *Galloperdix*. *Polyplectrum* (like the Gibbons or long-armed Apes) belongs to the Indo-Chinese and Malayan provinces of the Indian region, and is foreign to the Indian province of that region.

818. FRANCOLINUS VULGARIS.

With regard to the respective ranges of this and *F. pictus*, Captain Beavan writes word that "*F. vulgaris* is tolerably common in Maunbhoom; no *F. pictus* met with: Jerdon is mistaken as regards this part of the country." Dr. Adams remarks that *F. vulgaris* is common in cultivated localities on the lesser ranges, never in the valley of Kashmir or Ladakh. "The bird of the hills differs in size from that found in the plains of India, and its plumage is more brilliant. I have not compared the two. Many sportsmen consider them distinct; I think the differences are merely local" (P. Z. S. 1859, p. 186). For the western range of this species, past and present, see Lord Lilford's paper in 'The Ibis' for 1862 (p. 352). *F. yemensis,* Nicholson (figured in P. Z. S. 1851, *Aves,* pl. 40), is obviously a *Caccabis.*

819. FRANCOLINUS PICTUS.

Among the generic characters assigned by Dr. Jerdon we read (vol. iii. p. 558), "tarsi of the male with strong but blunt spurs." *F. pictus,* however, is spurless. The spurs consist of blunt knobs in *F. vulgaris*; and in *F. phayrii* (J. A. S. B. xiii. p. 1001, xxiv. p. 480) they are considerably more developed—more so than I have ever seen in *F. sinensis* (which is naturalized in the Mauritius), though not more so than in Vieillot's figure (Gal. des Ois. pl. 213). The last two resemble each other in plumage; but *F. phayrii* is smaller, with the bill and legs conspicuously less robust. To this bird must be referred the Siamese *F. pictus* noticed by Schomburgk (Ibis, 1864, p. 263).

821. AMMOPERDIX BONHAMI (Gray); O. des Murs, Icon. Orn. pl. 29, ♂.

822. ORTYGORNIS PONTICERIANA.

Dr. Adams states that this species is abundant on the low hills of the lesser ranges bordering the Punjab, but not near the valley of Kashmir or northward (P. Z. S. 1859, p. 186). It is common in the low northern half of Ceylon. A specimen in the Derby Museum at Liverpool has the entire throat ferruginous, this colour filling up the space which is usually indicated by a peripheral line. The species is thus figured by Temminck (Pl. Col. 213).

825. ARBORICOLA RUFOGULARIS was met with by Colonel Tickell in the mountainous interior of the Tenasserim provinces (J. A. S. B. xxiv. p. 276), together with a very distinct new species, *A. brunneipectus.* Subsequently he obtained a third species in the same tract of country, which he named *A. chloropus.* The

Partridges of this group are best obtained from natives of the country, who understand netting them. Comparatively few fall to the gun. They rise singly in such difficult places, in steep bamboo-clad hills, that even if occasionally hit by a snap shot they are oftener lost than picked up in localities where a trained dog is an unattainable desideratum: but there are ways of netting or snaring them; for I have received from Sylhet several dozens at a time of live *A. atrogularis*; and a lot of *A. torqueola* is similarly now and then obtainable at Almoreh and other Himalayan stations.

This group of *Peura*-Partridges, with long (or moderately long) straight claws and spurless, is greatly developed in the jungle-clad hills of South-eastern Asia and its islands, where probably several species yet remain to be discovered. I think we can already enumerate :—

(A. With the throat well feathered.)

1. *A. torqueola* (Temm. Pl. Col. 462, 463). The only species known to me in which the sexes present a marked difference of plumage, and a pair of which are now living in the Regent's Park Gardens. Himálaya.

2. *A. rufogularis*, nobis, J. A. S. B. xviii. p. 819, from the South-eastern Himálaya, at a lower altitude than the preceding race, and also the Tenasserim Mountains.

3. *A. brunneipectus*, Tickell (J. A. S. B. xxiv. p. 276). Tenasserim Mountains.

4. *A. javanica* (Brown, Ill. Zool. pl. 17; Temm. Pl. Col. 148; but *quære* the red surrounding the eye?). Java.

5. *A.* (?) *æruginosa* (Eyton, P. Z. S. 1839, p. 106). Malayan Peninsula.

(B. With the throat thinly clad with feathers, showing the crimson beneath.)

6. *A. personata* (Horsf. Zool. Res. pl.; *Perdix orientalis*, Horsf., Tr. Linn. Soc. xiii. p. 184). Sumatra (?) and Java.

7. *A. atrogularis*, nobis (J. A. S. B. xviii. p. 819; *Perdix olivacea* of Buchanan Hamilton's Drawings, not of Hardwicke's Ill. Ind. Zool.). Hills bordering the valley of the Bráhmáputra River southward.

8. *A. intermedia*, nobis (J. A. S. B. xxiv. p. 277). Probably from Arakan.

9. *A. charltoni* (Eyton, Ann. & Mag. N. H. 1845, xvi. p. 230). Malayan Peninsula, in Pinang, and Province Wellesley. (Type of *Tropicoperdix*, nobis, *passim*). Tenasserim Mountains.

10. *A. chloropus*, Tickell (J. A. S. B. xxviii. pp. 415, 453). Tenasserim Mountains.

(C. With a large bare space in front of neck.)

11. *A. punctulata* (Hardw. Ill. Ind. Zool.). Hab. —— ?

12. *A. crudigularis* (*Oreoperdix crudigularis*, Swinhoe, Ibis, 1864, p. 426). Formosa*.

The *Perdix oculea*, Temm. (Pig. et Gall. iii. p. 408; *Tetrao ocellatus*, Raffles, Tr. Linn. Soc. xiii. p. 322; Hardw. Ill. Ind. Zool.), of Mergui province and Sumatra, is the type of my *Caloperdix*; and *P. thoracica*, Temm. (Pig. et Gall. iii. p. 335, *Perdix* and *Arboricola sphenura*, Gray), is the type of *Bambusicola*, Gould, to which a second species has been added by Mr. Swinhoe from Formosa, *B. sonorivox*, Gould (B. As. pt. xvi.).

826. Perdicula cambaiensis (Latham); Temm. Pl. Col. 447.

The peculiar quivering whistle, which this species almost constantly utters continuously, should be noticed. It is the only species in Bengal. In a letter received from Capt. Beavan he states that this species is tolerably common in Maunbhoom. "I have got," he adds, "a female (by dissection) exactly like the male, with black bars across the breast, and a male without any bars at all (simply pale rufous with white shafts to the breast-feathers); and a young female (half-grown) is the same." I have asked Capt. Beavan to procure a good series; for the variation of plumage is certainly not yet sufficiently understood. *Perdix raalteni*, Temm., of Flores and Timor, appears to me to be a *Perdicula*; but I should like to see more examples of it. If the male wants the blunt tubercle in place of the spur, so also does that of *Francolinus pictus* as compared with *F. vulgaris*.

828. Perdicula erythrorhyncha (Sykes); *Microperdix erythrorhyncha*, Gould, B. As. pt. xiv. pl.

This certainly is not a *Perdicula*, but appears to me more nearly allied to *Excalfactoria*. In other words, it is a Quail, and not a diminutive Partridge as the name *Microperdix* implies.

---

* There would also seem to be a species in the Philippines (Martens, J. f. O. 1866, p. 25).

830. COTURNIX COROMANDELIANA is noticed from China in the Report accompanying the narrative of Commodore Perry's expedition; but it is not included in Mr. Swinhoe's list.

831. EXCALFACTORIA CHINENSIS (Linn.) (*vide* P. Z. S. 1863, p. 221).

E. minima, Gould (P. Z. S. 1859, p. 128), from Celebes does not appear to me to be particularly well distinguished.

832 and 833. TURNIX TAIGOOR and T. OCELLATA.

Oriolus (!) *ocellatus* of Scopoli (*Tetrao luzoniensis,* Gm.), of the Philippines, China, and Formosa, is quite distinct; and Dr. Jerdon's No. 833 is *T. pugnax* (Temm.) of the Indo-Chinese and Malayan countries, insufficiently distinguishable (as I think) from *T. taigoor* of India, unless by the fact that some Malayan females (*Hemipodius atrogularis,* Eyton) have a greater development of the black in front of the neck. A female from Ceylon, in the possession of Mr. Wallace, has the abdominal region of a *much* deeper rufous colouring than I have seen in any other; and Mr. Layard discriminates this as a different variety from that inhabiting the low northern half of the island, which latter does not differ from the Indian race. I would bring all together under *T. pugnax* (Temm.), subject to a certain amount of local variation.

834 and 835. TURNIX DUSSUMIERI (apud Jerdon) and T. SYKESI.

Referring to the original figure of *T. dussumieri* (Pl. Col. 454. f. 2) from Bengal, I find it to represent No. 835, the dimensions assigned being, length 5 inches, and the wing measuring (in the figure) 2·75 in. Dr. Jerdon gives the same length of wing to both species; but that must be a mistake. The wing of the allied *T. maculosa* measures 4 inches; and that of No. 834 is about intermediate. The latter should now rank as T. TANKI (B. Ham.) as described by me in J. A. S. B. xii. p. 181 (bis) (= *T. joudera,* Hodgson, by which name it is figured by Gray and Mitchell, Ill. Gen. Birds, pl. 131). No. 835 is *T. dussumieri* (*vera*) (= *T. sykesi,* A. Smith). I had identified (Ibis, 1865, p. 33) the *Ortygis luzoniensis* of Horsfield's Javan list with No. 834; but Mr. Wallace has described a nearly allied race from Timor as *T. rufescens* (P. Z. S. 1863,

p. 497), and the Javan specimen referred to is decidedly identical with the latter. Had Mr. Wallace's specimen been Indian, I should not have hesitated to regard it as a small male of *T. tanki*, as I formerly long considered a unique specimen of *T. maculosa* from Arakan to be an unusually large female of *T. tanki*. It would now seem that *T. tanki* is peculiar to the special Indian province of the Indian region, *T. maculosa* to the Indo-Chinese province (with China), and *T. rufescens* to the Malayan province. *T. maculosa* is figured by Vieillot (Gal. des Ois. pl. 217) with the rufous extending round the front of the neck, evidently a fine female—which compare with the figure of *T. tanki* by Gray and Mitchell. Mr. Wallace has noted the legs of *T. rufescens* to be "pale yellow;" whereas those of *T. tanki* could scarcely be described as *pale* yellow; they are tolerably deep and bright gamboge-yellow, while those of *T. dussumieri* are pinkish-white or flesh-coloured, and those of *T. pugnax* are plumbeous. *T. pugnax* and *T. tanki* are more or less common in most parts of India, the latter being rarer southward; but *T. dussumieri* is so rare in Lower Bengal that I only obtained one specimen of it a few weeks before my departure, which was taken in a garden in Calcutta. Mr. Wallace has a very distinct new *Turnix* from Macassar, with a remarkably stout bill, as yet undescribed.

836. EUPODOTIS EDWARDSI.

The Chinese Bustard referred to (iii. p. 611) was identified, from the sternum only, by Mr. A. Newton with the European and Asiatic *Otis tarda*, as I am informed by him.

837. HOUBARA MACQUEENI (Gray); Journal für Ornithologie, 1856, taf. iii.

838. SYPHEOTIDES BENGALENSIS.

A number of these birds, turned loose into the garden of my late friend R. W. G. Frith, Esq., having their wings clipped, would eagerly pluck at and swallow the large double flowers of the *Hibiscus rosa-sinensis* (the "shoe-flower" of Anglo-Indians). A fine male has lived since 1857 in the Zoological Gardens, Regent's Park, and has regularly undergone its seasonal changes, as I have likewise observed of others living in captivity. An egg of the species is figured (Contrib. Orn. pl. 47).

839. SYPHEOTIDES AURITUS (Latham); Temm. Pl. Col. 533.

OTIS TETRAX (iii. p. 625) has been intelligibly described to me as an inhabitant of the Pesháwur valley, where, on account of its small size, it is commonly given to the trained Falcons when struck down by them. It is known to be common in Mesopotamia; and my informant was well acquainted with the Likh (*S. auritus.*)

840. CURSORIUS COROMANDELICUS (Gmel.); Vieillot, Gal. des Ois. pl. 232 (*figura mala*); Gould, B. As. pt. viii. pl.

840, *bis*. CURSORIUS GALLICUS; Appendix, p. 874.

In a letter lately received, Dr. Jerdon mentions that this bird is "tolerably common" in the desert country westward of Delhi; whence he has sent a specimen. The egg is figured (Ibis, 1859, pl. ii.).

842. GLAREOLA ORIENTALIS extends its range to China. It breeds sometimes in the neighbourhood of Calcutta, where I have seen two or three brought to the provision-bazar too young to fly. A specimen with the feathers half-grown is mounted in the Calcutta Museum, and another which must have been bred at no great distance. Mr. Gould now considers the Australian Pratincole to be distinct from this. He has received the true G. PRATINCOLA from both the Bombay and Madras Presidencies By a slip of the pen Dr. Jerdon assigns *Oreophilus totanirostris* to Australia (iii. p. 629) instead of South America.

845. CHARADRIUS LONGIPES.

Mr. Gould gives the range of the European *C. pluvialis* as extending to Afghanistân (B. Gt. Brit. pt. v.). *C. pluvialis* from China, noticed in the Ornithological Report accompanying the narrative of Commodore Perry's Expedition, is of course *C. longipes.*

846. ÆGIALITES LESCHENAULTI (Lesson).

To this species belongs the *Charadrius asiaticus* of Horsfield and of Mr. Tristram (P. Z. S. 1864, p. 450), but not of Pallas, which is quite a different bird, and identified by Mr. Gould (Handb. B. Austral. ii. p. 229) with his *C. veredus* (the *Cursorius isabellinus* of Horsfield !), the latter being the young. The true *C. asiaticus* will probably yet turn up in India. Amongst the abundance of small waders which are brought daily to the Calcutta provision-bazar during the cold season, and for some time afterwards, *Æ. leschenaulti* is by no means common; whereas *Æ. mongolicus* is very plentifully supplied. The former has been received from Aden.

847. ÆGIALITES MONGOLICUS (Pallas) (*cf.* Ibis, 1865, p. 34); Middendorff, Sib. Reise, taf. xix.

Charadrius pyrrhothorax, Temminck, should be erased from the list of synonyms, the North-African species in summer dress having no white on the forehead and less rufous on the breast. These birds, with *Æ. leschenaulti,* are akin to *Æ. wilsoni* of North America and *Æ. inornatus* of Australia.

849. This is ÆGIALITES CURONICUS (Beseke) (*Charadrius minor,* Meyer; Gould, B. E. pl. 297) is distinct from *Æ. philippensis* (Scop.) (*C. peroni,* Temm.?), which is a species intermediate between it and *Æ. cantianus,* obtained by Mr. Wallace in Borneo. *Æ. philippensis* in nuptial dress has the usual white forehead surmounted by a black band, also a black loral streak and auriculars in part, crown rufescent-brown with a more rufous periphery, some black behind the white nuchal collar above, the black pectoral streak narrow or interrupted in front, and the tail unbanded, with the outermost three feathers white; legs pale in the dry specimens. Length of wing 4 inches, of tarsi 1·12 inch. *Æ. curonicus* was observed breeding in Central India by Capt. Beavan (P. Z. S. 1864, p. 376).

850. ÆGIALITES MINUTUS (Pallas), apud Jerdon. Two specimens are in the East-India Museum, one of which is the *C. philippensis* of Sykes's list (P. Z. S. 1832, p. 166). After learning the distinctness of *Æ. philippensis* and *Æ. curonicus,* I reexamined the type-specimen of Horsfield's *Hiaticula pusilla*; and though in bad condition, especially about the nape, I now recognize it as distinct and identical with *Hiaticula ruficapilla* (Gould, B. Austr. vi. pl. xvii.). It is in winter dress, and has not the white collar seen at all seasons in others of the present group. As compared with *Æ. curonicus,* the tail is more cuneate, with the dark band considerably less developed, showing only as a slight narrow cross stripe on the outermost feathers.

Ægialites nigrifrons (Cuv.) (*Charadrius melanops,* Vieillot, Gal. des Ois. pl. 235; Gould, B. Austr. vi. pl. 20; *C. russatus,* Jerdon, Madr. Journ. Lit. Sc. 1840, p. 213) is omitted by Dr. Jerdon, though he obtained a single specimen near Madras in the month of June (*i. e.* during the southern winter), which is now in the Calcutta Museum. Of course it is an exceedingly rare and accidental straggler.

Ægialites hiaticula (L.); *Charadrius placidus,* G. R. Gray, B. M. Cat. Hodgson's Coll. 2nd ed. p. 70.

Two examples of what I consider to be the common British Ring-Plover are among the skins sent by Mr. Hodgson to the British Museum. Both Mr. G. R. Gray and I have in vain sought to identify the *C. indicus* of Latham (*nec* Rüpp.).

853. Chætusia leucura (Licht.); Ibis, 1865, pl. x.; *Charadrius grallarius,* Lesson, *C. villotæi,* Audouin; *Vanellus aralensis,* Eversm. Bull. Mosc. xxvi. pt. 2, p. 497; *V. flavipes,* Savigny; the last specific name holds precedence. Dr. Jerdon has sent a specimen from Hansi.

854. Chætusia cinerea (Blyth); *Pluvianus* and *Lobivanellus cinereus,* nobis (J. A. S. B. 1842, xi. p. 587); *L. inornatus,* Temm. and Schl. Fauna Japon. *Aves,* tab. lxiii., 1850.

The black of the lower part of the breast is characteristic of the breeding-season. *Pluvianus cinereus,* nobis, is erroneously given as a synonym of *C. gregaria* by Dr. Bree.

856. Sarciophorus bilobus can scarcely be said to be "rare in Bengal." Two or three dozen specimens, at least, might be procured every season in the Calcutta provision-bazar; and I have repeatedly observed flocks upon arable land in the course of excursions which I have made up the river Hugli.

857. Hoplopterus malabaricus (Bodd.); "*Charadrius myops,* Lesson," Pucheran, Rev. Zool. 1851, p. 570.

Dr. Bree identifies this bird with the African *H. spinosus,* but, as I think, wrongly. It is common along the Burmese rivers, together with

858. Esacus recurvirostris (Gray and Mitch. Ill. Gen. B.

iii. p. 142), which latter I have obtained, rarely, in the Calcutta bazar; the former never.

859. ŒDICNEMUS CREPITANS; *Œ. indicus*, Salvadori, Atti Soc. Ital. Sc. Nat. 1866, tom. viii. (*Cf.* 'Ibis,' 1866, p. 415.)

Not very uncommon.

861. DROMAS ARDEOLA.

It was not only from the consideration of the plumage of immaturity that I concluded this remarkable bird to be akin to the Terns (J. A. S. B. xxi. p. 352). Prof. Schlegel, it appears, holds to the same opinion; as does also Mr. E. L. Layard, who was familiar with the living bird (Ann. & Mag. N. H. 1854, xiv. p. 270). It seems to me to bear that relationship to the Terns which *Phœnicopterus* does to the Geese, and to be allied neither to *Esacus* nor *Anastomus*. An egg sent to me as that of this species by Mr. E. L. Layard was very Tern-like; but, according to Dr. Heuglin, the *Dromas* "breeds socially, in June and July, in deep holes, made by itself, on sandy islands" (Ibis, 1859, p. 346).

862. HÆMATOPUS OSTREALEGUS, according to Mr. Swinhoe (P. Z. S. 1863, p. 310), should be *Hæmatopus longirostris*, Gray.

Among the characters assigned to the *Gruidæ*, Dr. Jerdon remarks (vol. iii. p. 661) that "the tracheæ are elongated, enter the ridge of the sternum, and are convoluted within it." This is true of *Grus* and of the scarcely separable *Anthropoides*, but not of *Balearica*. In the latter form the usual "sterno-tracheal" muscles are attached to the first pair of true ribs, and the trachea does not enter the keel of the sternum.

864. GRUS LEUCOGERANUS.

Dr. Jerdon lately wrote from Hansi, "A first-rate bird-catcher has assured me that a large white Crane came here every year, which he called the *Chini Kulong* [Chinese Crane], evidently *G. leucogeranus*." I have since heard of one obtained in Oude, which is now in the Museum at Lucknow.

868. GALLINAGO NEMORICOLA was only once obtained by me in the Calcutta provision-bazar. The same remark applies to *Chætusia flavipes, Phalaropus fulicarius, and Pseudoscolopax semipalmatus.* One of the large eastern species of *Gallinago* is errone-

ously figured by Gustav Radde as *Scolopax* (*Spilura*) *stenura*, Temm. (Reisen &c. ii. taf. xiii.).

871. GALLINAGO SCOLOPACINUS.

Mr. Gould (B. Gt. Brit. pt. iv.) considers the common fan-tailed Snipe of India and China identical with the British species.

873. RHYNCHÆA BENGALENSIS (L.); *R. variegata*, Vieillot, Gal. des Ois. pl. 240.

The egg and chick have been figured (Contrib. Orn. 1852, pl. 89); and Mr. Layard (Ann. & Mag. N. H. 1853, xi. p. 228) says, "nest, a slight depression of the soil, lined with a few tufts of grass; eggs four in number, of a brownish-yellow, washed all over with dark blotches, rather more frequent at the obtuse end, apparently at times taking an annular form." The young, with feathers half grown, spread the wings and tail, displaying their beautiful markings as in *Eurypyga*, and try to look fierce at the beholder. I have occasionally obtained broods of four each in the Calcutta bazar, but could never get them to live; nor could I manage to keep the old birds in captivity as I have succeeded in doing with Snipes.

874. PSEUDOSCOLOPAX SEMIPALMATUS.

Mr. Swinhoe well remarks of this species, "In its bright summer garb, and in almost every particular, this bird is a perfect Godwit. You have only to cut off the bill, and it is almost undistinguishable from *Limosa uropygialis*. It forms the same connecting link between *Limosa* and *Scolopax* that *Macrorhamphus griseus* appears to form between *Totanus* and *Scolopax*." (P. Z. S. 1863, p. 313). Why not *Limosa*, rather than *Totanus*, in both instances?

LIMOSA LAPPONICA (L.), as a species occurring rarely in the Himálaya (Ibis, 1865, p. 36), must be added to the Indian list.

876. TEREKIA CINEREA (Gmel.), *Scolopax sumatrana*, Raffles.

877. NUMENIUS LINEATUS, Cuv. Règne An. 2nd ed. i. p. 52, note 2 ("Courlis à taches étroites de l'Inde") (*N. major*, Temm. and Schl. Faun. Japon. *Aves*, pl. lxvi.), is the Indian Curlew, and not *N. arcuatus* (L.) as stated by Dr. Jerdon. The difference

struck me at once upon my return to England and again seeing numbers of the latter hanging up in the poulterers' shops. British Curlews are far more uniform in size, and have the breast and flanks much more conspicuously spotted, the spots being broader and more developed. Both species, however, are noted by Mr. Swinhoe from China, *N. lineatus* as a more southern bird than the other*. Mr. Swinhoe (P. Z. S. 1863, pp. 317, 318) gives as many as nine species of Curlew (one or two perhaps insufficiently distinguished) from China, Formosa, and Japan; and his no. 314 is perhaps the supposed *N. tenuirostris* "stated to have been met with in Burmah," according to Dr. Jerdon. I have considerable doubt, however, of the latter having been other than a small-sized individual of *N. lineatus,* a species which varies remarkably in size, quite as much so as *Limosa ægocephala*; and I believe that the *N. arcuatulus,* Hodgson (Gray, Misc. p. 86; B. M. Cat. Hodgson's Coll. 2nd ed. p. 137), is founded on a small-sized *N. lineatus.* I long habitually sought for the supposed *N. tenuirostris* among the considerable numbers of *N. lineatus* brought to the Calcutta bazar; and once only I obtained *N. phæopus,* which, it may be remarked, is not the "Woodcock" of Bengal tables, as Dr. Jerdon strangely asserts (p. 685), *Limosa ægocephala* being the species so called.

879. IBIDORHYNCHUS STRUTHERSI, Vigors; Gould, B. As. pt. viii. pl.

884. TRINGA DAMACENSIS, Horsf.; *T. subminuta,* Middend., is quite distinct from *T. minuta,* L., which has a broader bill and shorter toes. *T. albescens,* Temm., has been obtained in Ceylon (Ibis, 1864, p. 420): it is identified by Prof. Schlegel with *T. minuta.*

886. TRINGA PYGMÆA is not often brought to the Calcutta bazar. Amongst the great numbers of *T. subarcuata* it rarely happens that two or three may be selected of *T. cinclus* or this species, which is the supposed *Eurhinorhynchus pygmæus* of Mr. Swinhoe on a former occasion (P. Z. S. 1863, p. 317), an error which he afterwards corrected (P. Z. S. 1864, p. 272).

---

* Prof. Schlegel gives *N. major* from Sumatra, Java, Borneo, and South Africa, and *N. arcuata* from Nepâl (!), Sumatra, and Java (Mus. P.-B. *Scolopaces,* p. 89).

887. EURHINORHYNCHUS PYGMÆUS.

In summer dress this bird has the head, neck, and breast bright rufous, as shown by a specimen in Mr. Barrow's collection obtained in one of the Arctic voyages (P. Z. S. 1859, p. 201).

890. LOBIPES HYPERBOREUS.

A specimen in winter dress was obtained in one of the Aru Islands by Mr. Wallace! (P. Z. S. 1858, p. 188).

891. ACTITIS GLAREOLA is brought in extraordinary numbers to the bazar; but amongst them I could never detect the *Totanus affinis* as figured by Hardwicke and described by Swinhoe. The *Totanus affinis* of Horsfield, as shown by the type specimen in the India Museum, and formerly mentioned by Strickland (Ann. & Mag. N. H. 1844, xiv. p. 120), is identical with the *Tringa glareola* of Gmelin. The name *affinis*, however, may perhaps be retained for Mr. Swinhoe's species, but in that case as *affinis* of Hardwicke and Gray (*nec* Horsfield). In Borneo it is said to be "a true freshwater species, frequenting rivers, and perching on the *batangs* or large logs of drift timber, being frequently seen in small packs, probably families, and flying close under the banks of the river, with a jerking, uneasy flight" (P. Z. S. 1863, p. 222). The *T. leucurus* of Hardwicke and Gray, represented on the same plate, remains to be identified.

893. ACTITIS HYPOLEUCA is certainly very common in Lower Bengal during the cold season.

894. TOTANUS GLOTTIS.

Dr. Jerdon omits to describe the summer dress. I have not found it to differ from that of *T. stagnatilis*, varying much in intensity of development in both species. Both of them are brought in considerable numbers to the bazar. How familiar to my recollection at this moment, in imagination, sounds the ringing *tung-tung* of the Greenshank, in association with remembrance of the scenery of its haunts! It is even a more characteristic accompaniment than is the whistle of *Numenius lineatus*, which is similar to that of the British Curlew.

898. HIMANTOPUS CANDIDUS.

I have lately seen Australian specimens with the black nape, quite similar to certain Bengal examples* (*cf.* Ibis, 1865, p. 35).

900. Metopidius indicus (Lath.); *Parra melanochloris* et *P. melanoviridis*, Vieill., Gal. des Ois. pl. 264.

Adults of this species are similar at all seasons, unlike those of *Hydrophasianus sinensis.* This I can assert positively from long-continued observation of the numbers of both species which are brought almost daily during the greater part of the year (more or less) to the bazar. I am unable to perceive any affinity to the *Rallidæ,* on the part of the *Parridæ,* in structure or in habits, plumage, or the character of the eggs or chick†; and the *Palamedeidæ* appear to me to approach rather the Spur-winged Geese, and especially *Anseranas.* The anatomy and also the eggs and young of the *Parridæ* indicate considerable relationship to the Snipes and Plovers, but most assuredly not to the *Rallidæ.* They stand, however, very much *per se* as an isolated and strongly marked group. The eggs of both of the Indian species of Jacana have been figured (Contrib. Orn. 1852, pl. 89).

901. Hydrophasianus sinensis (Gmel.); Vieill., Gal. des Ois. pl. 265.

This bird carries the back horizontally, the head sunk between the shoulders (so that the crown is commonly on a level with the back), and the long arched middle tail-feathers are well raised, often more so than in Mr. Gould's figure (B. As. pt. vii.), as may be seen in a stuffed specimen which I sent to the Indian Museum.

---

* The whole of the *Scolopacidæ* enumerated by Rüppell as occurring in North-eastern Africa, twenty-two in number (Syst. Uebers. p. 125), are likewise met with in Lower Bengal, excepting *Numenius arcuatus* (replaced by *N. lineatus*), *Tringa minuta* (replaced by *T. damacensis*), *Calidris arenaria*, *Gallinago major*, and *G. æquinoctialis*; of his twenty-four species of *Charadriadæ*, only *Œdicnemus crepitans* (?), *Ægialites leschenaulti*, *Æ. indica* (?), *Æ. cantiana*, and *Æ. curonica,—Hæmatopus* being presumedly different; but the genera and subgenera are the same, excepting only that of the Dottrel. *Æ. indica*, Rüpp. (nec *Charadrius indicus*, Lath.), is *C. tricollaris*, Vieill. (*cf.* Schlegel, Mus. P.-B. *Cursores*, p. 24).

† *Cf.* P. Z. S. 1863, p. 513: Ibis, 1864, p. 360.

902. Porphyrio poliocephalus (Lath.); "*P. smaragnotus*, Temm.," Sykes, P. Z. S. 1832, p. 165.

On the eastern side of the Bay of Bengal the range of this species extends to the South Tenasserim provinces; while that either of *P. smaragdinus*, Temm. (the Sumatran species), or of *P. indicus* (the Javan race, which differs slightly) begins with the Malayan Peninsula.

904. Gallicrex cristata.

The range of this bird extends to China. After the breeding-season the caruncle of the male shrinks into a mere pointed frontal shield, and the colouring of the plumage changes by moulting to that of the female. The hue of the breeding-season is assumed by a change of colouring in the same feathers as the caruncle again rises. Judging from Mr. Wolf's figures of the Weka-Rail of New Zealand, I should infer that the plumage of the male of that species undergoes a similar change.

906. Gallinula burnesi.

This presumed species was discriminated from the fragments of a specimen (which should still be in a stoppered bottle in the Calcutta Museum) compared with one of Sir A. Burnes's drawings, and not from a specimen sent by him.

907. Porzana phœnicura ranges as far as Timor, and is also found in China. The blood of this species is accounted a valuable remedy by the natives of Bengal, as is also that of *Casarca rutila*; hence in the bazar the dealers want a higher price for *P. phœnicura* than for other birds of its size.

908. Porzana akool (Sykes); *Ortygometra griseopectus*, G. R. Gray, B. M. Cat. Hodgson's Coll. p. 75.

911. Porzana fusca inhabits also China, Formosa, and Japan. *Ortygometra flammiceps*, G. R. Gray, B. M. Cat. Hodgson's Coll. p. 75 ?

912. Porzana zeylanica (Gmel.); *Ortygometra superciliaris*, G. R. Gray, B. M. Cat. Hodgson's Coll. (*nec* Eyton).

This species is not, to my knowledge, an inhabitant of Lower Bengal. An allied species exists in the *Rallina minahasa*, Wallace (P. Z. S. 1862, p. 346), from Celebes.

913. Rallus striatus inhabits also Formosa and Southern China.

914. Rallus indicus is probably Mr. Swinhoe's *R. aquaticus* from China and Japan.

The *Crex pratensis* is stated by the well-known Indian sporting writer "Purdey" to have been once shot by him in Oudh. I know of no other authority for it as an Indian bird, but have seen specimens from Afghánistân.

917. Mycteria australis.

Mr. Gurney has remarked (Ibis, 1865, p. 276) that in both this and the African *M. ephippiorhyncha* the irides are dark brown in the male sex, and bright yellow in the female.

919. Ciconia alba.

Dr. Jerdon asserts that the White Stork is "unknown in Bengal." Two or three, or more, may be obtained almost every season in the Calcutta bazar; and I have been assured that this species occurs in large flocks not far in the interior. For several years I kept two live specimens which I obtained in the bazar, and which had been only slightly winged.

920. Melanopelargus episcopus (Bodd.); *C. microscelis*, Gray & Mitch. Ill. Gen. Birds, pl. 151.

Its range extends to the Malayan province and also to Africa, where likewise occurs the *M. pruyssenaeri*, Hartl. (Ibis, 1864, p. 430), if it be really distinct. This is a particular type of Stork, distinguished by its peculiar downy neck-feathers, and by the remarkable form of tail noticed by Dr. Hartlaub, which also occurs in the South American *Ciconia maguari*.

For remarks on various Indian Herons, *vide* 'Ibis,' 1865, p. 36 *et seq.*; also Swinhoe, in P. Z. S. 1863, p. 319.

926. Herodias egrettoides (Temm.) ("*Ardea nivea*, Cuv., Pucheran, Rev. Zool. 1851, p. 576) is "very common" in Macedonia, according to Col. Drummond-Hay (Ann. & Mag. N. H. 1846, xviii. p. 14).

930. Ardeola leucoptera.

The species described under this specific name by Boddaert is not likely to be the Indian bird; and *A. grayi* will probably have to be adopted for the latter. *A. malaccensis* is a distinct race (Ibis, 1865, p. 38).

931. BUTORIDES JAVANICUS is less nocturnal in its habits than the *Ardettæ* and *Botauri*. I have many times come upon it watching for fish in the day-time, generally in muddy places nearly of its own colour. It prefers shade, and occurs numerously in swampy localities *.

934. ARDETTA SINENSIS (Gmelin); "*Ardea melanophis* et *A. melanotis*, Cuv.," Pucheran, Rev. Zool. 1851, p. 375.

938. TANTALUS LEUCOCEPHALUS, Gmel.; Vieill. Gal. des Ois. pl. 247; Gould, B. As. pt. xiv. pl.

On the eastern side of the Bay of Bengal I observed a flock of nine or ten of this species, associating with a large herd of tame white Buffalos, on the banks of the Tavai River, Tenasserim; but it appears to be replaced by *T. lacteus*, Temm. (Pl. Col. 352) in the Malayan Peninsula. The late M. Mouhot procured it in Siam. The curious habit it has, in common with its congeners, of putting forth its foot to feel in the mud for anything there moving, must be familiar to those who have had opportunities of observing it tame.

939. PLATALEA LEUCORODIA.

The convolution of the trachea is not of constant occurrence in this species. According to my experience, the Spoonbill is less common in Lower Bengal than *Ciconia alba*.

940. ANASTOMUS OSCITANS (Bodd.); *A. coromandelianus*, Vieill. Gal. des Ois. pl. 251 (white adult).

The white birds mentioned by Dr. Jerdon are, for certain, adults in breeding-plumage, which reassume, by moulting, the colouring of the young. At the time the latter leave the nest there is no indication of the future opening between the mandibles; and the bill long continues to increase in size. More than one young specimen, showing the non-emarginated tomia of the bill, is mounted in the Calcutta Museum. I have unsuccessfully tried to rear the young on *Ampullariæ* and *Uniones*, having had dozens of them brought to me at a time, which survived only for a few weeks. (In confirmation of what I state of the young, *cf.* Tytler, Ann. & Mag. N. H. 1854, xiii. p. 374.)

---

* With reference to my remarks on *Gorsachius* (Ibis, 1865, p. 38), Mr. Swinhoe's observations on the seasonal changes of the crest-feathers (Ibis, 1866, p. 403) seem to indicate that there is only one species, which should stand as *G. melanolophus* (Raffles), with *Ardea goisagi*, Temm., as a synonym.

941. THRESCIORNIS MELANOCEPHALUS (Linn.); *Ibis leucon*, Temm. Pl. Col. 481.

Generally diffused over the Asiatic Archipelago. The young, as in *T. religiosa*, have the head and that portion of the neck which is bare in the adult clad with short blackish feathers. Occasionally the bare neck is coloured behind as that of *T. strictipennis* is figured in Mr. Gould's 'Birds of Australia.'

942. GERONTICUS PAPILLOSUS does not occur on the alluvium of Lower Bengal. Prof. Schlegel notes it from Ceylon and from Borneo.

944. PHŒNICOPTERUS ROSEUS.

There are two distinct Indian Flamingoes, one of which is smaller and has proportionally shorter legs than the other. Bonaparte, in 1855, named the smaller one *P. blythi* (Consp. Av. ii. p. 146), but almost at the same time (C. R. xl. 274) marked it as doubtful; however, in 1856 (C. R. xliii. 992) he suggested its identity with the true *P. roseus* of Pallas. To me it appears identical with the African *P. minor*; but Vieillot's figure of his *P. minor* (Gal. des Ois. pl. 273), from Senegal, is hardly good enough to assist in the determination; Mr. C. J. Andersson's note on the two Flamingoes of South Africa (Ibis, 1865, p. 64) gives some more details on the subject.

945. ANSER CINEREUS.

Adults of this species, as may occasionally be seen in British specimens, have very commonly the lower parts much mottled with black, but not in such large blotches as adults of *A. albifrons*. This I do not remember to have seen in the domestic race. While mentioning that this bird is "the origin of the domestic Geese of Europe, not of China," Dr. Jerdon should have added the curious circumstance that the domestic Geese of India are of a prolific hybrid race between *A. cinereus* (*domesticus*) and *A. cygnoides* (*domesticus*), as manifested alike by form, colouring, and voice—an obvious fact he only mentions subsequently (p. 784), and then solely on my authority. The only wild Geese that visit Lower Bengal are *A. cinereus* and *A. indicus*, which are brought in about equal numbers to the Calcutta bazar.

950. SARCIDIORNIS MELANONOTUS (Gmel.); Penn. Ind. Zool. pl. xiii.; Vieill. Gal. des Ois. pl. 285.

The young of this species, in its first feathers, is very like a *Dendrocygna*; and this indicates the true affinity of the genus. The rostral protuberance of the male becomes immensely more developed during the breeding-season. Signor Antinori recognizes *S. africana*, Eyton, as distinct, but gives *S. melanonotus*, auct., as a doubtful synonym—"*Sarkidiornæ regiæ* similis, sed caruncula rostri basi incumbente, et turgidiore," the South American *Anas regia* of Molina being referred to, and the supposed distinction being, I suspect, merely seasonal.

951. NETTAPUS COROMANDELIANUS.

The black collar round the neck of the male is peculiar to the breeding-season. The published figures of the species of this group, representing them as standing on the ground like ordinary Ducks, are erroneous. They squat, creep, and are only able to shuffle forward a few paces. The "Cotton Teal" is brought in tolerable abundance to the Calcutta bazar.

952. DENDROCYGNA ARCUATA (L.); *D. javanica*, Horsf. (*partim*).

Common in Malacca, Java, and Borneo (P. Z. S. 1863, p. 224). It is distinct from *D. vagans*, Eyton, *D. gouldi*, Bp. (*cf.* Ibis, 1865, p. 38), of the Philippines, Java, and North Australia.

953. DENDROCYGNA MAJOR inhabits also Madagascar (P. Z. S. 1864, p. 300). This species is assuredly much less common than the former in Lower Bengal, where many dozens of *D. arcuata* may be obtained to one of the other. These birds build in trees, and fly round and round their favourite pond like a flock of Pigeons, allowing themselves to be shot at again and again as they wheel round. They are very easily tamed. This Asiatic form of *Dendrocygna* has a very decided American representative in *D. fulva* (Baird's 'Birds of North America,' pl. 63. f. 1).

955. Casarca scutulata (S. Müller); Wolf, Zool. Sketches, ii. pl.

My designation of *C. leucoptera* must yield to the one above given. Two mostly white specimens in the British Museum look very like a domesticated race of this species.

958. Anas boschas occurs, as I have been assured, so near Calcutta as at Ranigunge; but I never knew of its being brought to the Calcutta bazar.

959. Anas pœcilorhyncha is included in Mr. Swinhoe's list of the birds of China (P. Z. S. 1863, p. 324); but he has since considered the Chinese form to be distinct, and named it *A. zonorhyncha* (Ibis, 1866, p. 394). It is probably the *A. pœcilorhyncha* of the 'Fauna Japonica' (tab. lxxxii.). An African species, received with this name, I described as *A. rueppelli* (J. A. S. B. xxiv. p. 265); but it is *A. flavirostris*, A. Smith; and *A. leucostigma*, Rüppell, is *A. sparsa*, A. Smith.

965. Querquedula circia breeds sparingly, no doubt, in India as well as in Burma and Tenasserim (Ibis, 1859, p. 464).

Clangula glaucion was obtained by Sir. A. Burnes on the Indus, and is figured among his drawings in the possession of the Asiatic Society. It should therefore be added to the birds of India.

972. Mergus castor I have seen in the Calcutta bazar on one occasion only, when two females were brought thither.

973. Mergellus albellus.

The adult female has the loral region black: this is not usually figured or described, as young females (similar in colouring to young males) are mistaken for adults. It is remarkable that this bird has constantly only a single minute *cæcum*, as in the Herons; whereas the true Mergansers have the usual two cæca considerably more developed.

978. Larus fuscus, Linn.

Dr. Jerdon's notice of this species as an Indian bird conveys the impression that he only obtained one specimen, in immature plumage; many years ago he sent an adult from the Coromandel coast to the Museum at Calcutta. It also occurs in the Arabian and Red Seas, though perhaps confounded there with *L. fuscescens,* Licht.

979. CHROICOCEPHALUS ICHTHYAETUS.

The young was sent by Col. Tickell to the Asiatic Society from Central India (Chaibása). I have procured adults in fine summer dress, with intensely black hood and finely coloured bill, from the mouth of the Hugli. Prof. Schlegel designates the Bengal race *Larus ichthyaetus minor,* and gives the length of closed wing as "16 pouces 4 lignes;" while Dr. Jerdon gives the length of wing as 19 to 20 inches (English measure).

980. XEMA BRUNNEICEPHALA (Jerdon); *Larus brunneiceps,* Cabanis; "*L. lachrymosus,* Licht." (*nec* Brehm), Schlegel; "*L. ridibundus,* var. *major,* Middendorff," Swinhoe.

984. HYDROCHELIDON INDICA (Steph.); *H. fluviatilis,* Gould, B. Austr. vii. pl. 30.

985. SEENA AURANTIA.

I do not perceive the affinity of this bird to the Marsh-Terns. It is a true River-Tern with a thick bill, and, except *Sterna melanogaster,* is the only River-Tern I have observed in Bengal, where, of the Marsh-Terns, *Gelochelidon anglica* and *Hydrochelidon indica* are common. I have met with no other.

STERNA PARADISEA, Brünn.; *S. dougalli,* Mont. (vol. iii. p. 840).

Prof. Schlegel (Mus. P.-B. *Sternæ,* p. 24) notices a specimen of this bird, in summer dress, from Bengal, obtained by M. Dussumier.

988. STERNULA MINUTA.

I am not well satisfied with the determination of this species (*cf.* Swinhoe, 'Ibis,' 1863, p. 429).

989 and 990. THALASSEUS CRISTATUS and T. BENGALENSIS.

Eggs have been figured in 'The Ibis' (1860, pl. v.) under the synonymous names *Sterna velox* and *S. affinis,* Rüppell. The first is also identical with *Sterna bergii,* Lichtenstein, according to Schlegel, who distinguishes it from *S. pelecanoides,* King; Dr. Pucheran has treated of *S. bengalensis,* Lesson (Rev. Zool. 1850, p. 342). (*Cf.* also 'Ibis,' 1865, p. 39.)

994. ANOUS TENUIROSTRIS of my Catalogue is, according to Prof. Blasius (J. f. O. 1866, p. 83), *A. stolidus*! This is a strange mistake. I had both species from the Bay of Bengal, far too distinct to be confounded one with the other (*cf.* Ibis, 1864, p. 393).

995. RHYNCHOPS ALBICOLLIS.

I found the remains of small fishes in the stomach of one which I examined a little before my departure from Calcutta, Dr. Jerdon having drawn my attention to the circumstance that he could never make out what these birds had fed on. I examined three specimens, in one of which small fish-bones were distinctly traceable. It is not often brought to the Calcutta bazar.

996. PHAETON ÆTHEREUS, Linn.; Vieill. Gal. des Ois. pl. 279.

I kept a bird of this species for some time alive in an aviary. It was in the barred first plumage; and I observed it to manifest that propensity for clambering (propping itself up by the stiff tail-feathers) which is evinced also by young Cormorants and Gannets. It is the ordinary species of Tropic-bird in the Bay of Bengal.

998. SULA FIBER, Linn.; *S. sinicadvena*, Swinhoe, Ibis, 1865, p. 109.

Comparing Mr. Swinhoe's description with Mr. Gould's figure, I can perceive no distinction.

1002. PELECANUS MITRATUS, Lichst.; Pl. Enl. 87.

The Indian Pelicans are referable to two subgroups, viz.:— the *P. onocrotalus* type, with a ruby eye in the adult and the feathered portion of the forehead contracted and advancing to a median point in front; and the *P. crispus* type, with a white iris in the adult and the feathered portion of the forehead much broader and advancing forwards towards each nostril (or to where the nares should be), the anterior border being thus somewhat concave or crescentic.

All of the first are merged under *P. onocrotalus* by Professor Schlegel; but no one acquainted with the living birds could accede to this general identification of them. First, there is the *P. mitratus*, Lichtenstein (as adopted by Dr. Jerdon, and also by Mr. G. R. Gray in the British Museum). This, as Dr. Jerdon remarks, is the *P. onocrotalus* of Bonaparte and Bree, and it is identical with the species so labelled in the Zoological Gardens. It has a pendant occipital crest of straight and narrow feathers, and in the breeding-season the forehead becomes much inflated; the naked skin of the cheeks is pale carneous, and that of the pouch very pale yellow. This race is not common in Bengal, according to my experience. I obtained one specimen, killed near Dacca, and saw one fine living adult in the menagerie of the Máharája of Burdwán, where it was accompanied by equally fine examples of the next race, all in thoroughly mature plumage; and I afterwards saw another adult in Calcutta, with Bábu Rajendro Mullick.

The ordinary Bengal Pelican (*P. onocrotalus* apud Jerdon, and also of the British Museum) has never any pendent occipital feathers; but the crest is formed of plumes of loose and open texture, not much elongated and curling upwards. The forehead is never tumid, as in the preceding race; the bare skin of the cheeks is deep purplish or livid carneous, and that of the pouch intense bright yellow. Moreover the feathers of the lower parts are conspicuously shorter and more uniform, not so distinct and lanceolate as in the other. A mature female measured 5 ft. 6 in. in extreme length, and 8 ft. 10 in. in extent of wings; wing from wrist 2 ft. 2 in.; tail 8 in.; bill to forehead 14·5 in.; tarse 5·5 in. Another specimen had the bill to forehead 15·5 in., and the wing 27 in. In another the bill measured 16 inches.

A third race is the true *P. javanicus*, Horsfield, as correctly assigned by Dr. Jerdon, and as now identified from the type-specimen in the Indian Museum: distinguished from the last by its inferior size. A male in very fine adult plumage measured 4 ft. 8 in. in extreme length, and 7 ft. 10 in. in extent of wings; wing from wrist 1 ft. 11 in.; tail 7 in.; bill to forehead 11 in.; tarse 5 in. In this individual the usual patch upon the breast, characteristic of the breeding-season, was deep and dark ferruginous, quite sufficiently like a blood-stain to have given rise to the old supposition of the Pelican feeding its young from its own breast! Dr. Jerdon considers this to be the most abundant of the White Pelicans that visit India.

A fourth race is a similar diminutive of *P. mitratus,* which I take to be the *Onocrotalus minor* of Rüppell. A specimen lately sent to the Zoological Society by Capt. Beavan, from Burma, has a remarkably full pendent occipital crest, the longest feathers of which measure 3·5 in.; bill to forehead 11 inches. This bird is very distinct from several examples of *P. onocrotalus* apud Jerdon, which were forwarded together with it.

Of the *P. crispus* type, with white irides in the adult, there appear to me to be two nearly allied species—*P. rufescens* in Africa, rather larger, with bill unspotted, or the spots hardly discernible, and *P. philippensis* in Southern Asia, with the upper mandible conspicuously marked with a row of impressed black spots on each side of its medial ridge above. Prof. Schlegel unites them as one species. There is a living example in semi-adult plumage, from Western Africa, now in the Zoological Gardens, and the skin of a nearly similar individual, from Natal, in the British Museum; and these certainly do not appear to me to be quite identical with the Indian bird. But I only know of the latter with somewhat deep vinous-rufescent back and rump in the mature plumage, which Dr. Jerdon considers to exemplify "undoubted *rufescens,*" as distinguished from his "Grey Pelican" of Southern India, the latter being, in my opinion, the same bird in semi-adult phase (as described by him); and certainly I saw a fine living adult in the Zoological Garden at Madras with the colouring which he supposes to distinguish *P. rufescens.*

Pelicans are long-lived birds which attain their fully mature plumage not before their third or fourth moult; and, where shot at, the old ones become shy and are comparatively seldom obtained, nearly all of those which are not uncommonly brought to the Calcutta provision-bazar being in immature plumage. The details which I have here given will help considerably to direct future observations; and it is very desirable that all of the Indian species and races, excepting *P. mitratus,* should be sent *alive* to the Zoological Gardens, where already there are species of this genus from Australia and South America, which were necessarily sustained on other than a fish diet during their voyage hither. It is only by seeing and comparing the living birds together, especially when in mature plumage, that the differences between some of them become conspicuously and unmistakeably apparent.

1005. GRACULUS CARBO.

Prof. Schlegel gives this species from Sumatra, as well as Australia and New Zealand (*G. carboides*, Gould). Capt. Briggs sent it from Tavai, Tenasserim (P. Z. S. 1859, p. 150).

1006. GRACULUS FUSCICOLLIS, Stephens; Gould, B. Austr. vii. pl. 67; *Phalacrocorax sulcirostris*, Brandt; *P. sulcirostris* et *P. stictocephalus*, Bonap.; *P. purpuragula*, Peale; *P. sinensis*, G. R. Gray, B. M. Cat. B. Nepaul, p. 149.

Mr. Wallace obtained this species from Batchian and Ceram; and Prof. Schlegel gives it from Australia, the Moluccas, and Borneo. Mr. Titian R. Peale obtained it at Manna Bay, New Zealand. I at once recognized the Indian bird on seeing Mr. Wallace's specimens. It is presumably the species referred to *G. sinensis* by Dr. Adams (P. Z. S. 1859, p. 189) as frequenting (with *G. carbo*) the lakes and Jhelum river in Cashmere. Mr. Hodgson figures a young bird very rufous above, with the lower parts white, deeply tinged with rufous.

1007. GRACULUS JAVANICUS (Horsf.); *Halieus africanus*, Sundevall.

Prof. Schlegel identifies this with *G. pygmæus* (Pallas), remarking that specimens from the continent of India, Java, and Borneo are absolutely similar to others from Hungary and Algeria. This would hardly be suspected from either Mr. Gould's or Dr. Bree's coloured figures.

1008. PLOTUS MELANOGASTER.

In summer dress many silky black feathers are interspersed on the plumage of the head and neck. Vieillot's figure of the American Anhinga, which he erroneously assigns to *P. melanogaster* (Gal. des Ois. pl. 278), shows a seasonal ornamentation of the kind, but somewhat different from that of the Indian species. The stuffed specimens of this genus usually seen in museums do not impart a correct idea of the appearance of the living birds. The slender portion of the neck contracts into a strong sigmoid curvature, the angles of the vertebræ showing conspicuously, as in the Herons; and the small gular pouch is usually inflated. Ludicrous as is the figure of this bird in Pennant's 'Indian Zoology,' it has evidently been copied from a drawing taken from life, and considerably altered for the worse by the copyist. The chief faults are, that the slender portion of the neck should be much more so, showing the angles of the vertebræ behind distinctly, and that there should be two conspicuous distinct angles in front, above where the neck thickens. The angles of a Heron's (or especially an Egret's) neck will illustrate what I mean. I kept one long in my aviary, which was as familiar and intelligent as Cormorants are in like circumstances. Once I had a bird of this species brought to me in an emaciated state—it having seized a common small siluroid fish (*Hypselobagrus tengara*), which had erected its pectoral spines, piercing the skin of the bird's neck on each side and there fastening, so that it could not be got rid of, and the bird was consequently dying from inanition.

A resident in Calcutta may make a fine collection of the wading and swimming birds of Lower Bengal by attending diligently at the Dhurrumtollah bazar during the cold season and for some time afterwards. He must be there soon after daylight to have the pick of them as they come in, not only from the eager khánsamars who purvey for their masters' tables, but before the dealers injure them by plucking off the feathers from one side of the breast in dead birds, or those from the rump of living birds as is their atrocious custom. No matter how badly the birds may be wounded, they are never killed till purchased (indeed they are mostly kept to linger in their agony till wanted by the cook), and, while living, have the longer primaries of the two wings tied together into a tight knot round the legs, above the tarsal joint, so tightly as generally to injure the legs past recovery when carefully untied and it is wished to keep the bird alive. The knotted feathers cannot be loosened without difficulty and some exercise of patience; they should then be dipped in warm water and carefully smoothed with the fingers, when they will recover their shape better than might be expected. The smaller *Rallidæ* are brought uninjured in peculiar cages, and are often to be had of certain of the fish-dealers. Of birds that bite at the fingers, as the Small Cormorant and even the Little Grebe, it is not unusual for the bazar-dealers to break the lower mandible. I have seen even *Chætornis striatus* (no. 441) thus served. Small living Insessores have the primaries coarsely torn from one wing, and often the tail goes with them. From all of which various modes of mutilation the collector must be prepared to undergo some degree of vexation occasionally. But in the long run he may procure a very extensive series of fine specimens in all phases of plumage.

Addenda et Corrigenda.

MICRONISUS SOLOENSIS (Ibis, 1866, p. 240) has been obtained in the Nicobar Islands, according to Von Pelzeln (Reise 'Novara,' Vögel, p. 12).

31. HIERAETUS PENNATUS.

I have already remarked (Ibis, 1866, p. 241) that a rudimentary crest is always observable in Indian specimens; at least I found it so in all which I obtained in Bengal, in one which I shot near Moulmein, and in one or two South-Indian specimens received from Dr. Jerdon; but I cannot perceive a trace of rudimentary crest in two mounted Nipâl specimens in the British Museum, received from Mr. Hodgson. The rudimentary crest referred to resembles that of *Spizaëtus limnaetus* of Bengal, and also of many Bengal examples of *Pernis cristatus*; and as the subcrested *Hieraetus* averages a rather larger size than the European *H. pennatus*, I do not think that it can be distinguished from the Australian *H. morphnoides*, Gould. Mr. Swinhoe's crested specimen of *Poliornis poliogenys* (Ibis, 1864, p. 429) should here be borne in mind. Mr. H. E. Dresser agrees with me in the opinion that the white-breasted specimens of *H. pennatus* are adults, as in *Eutolmaetus bonelli*; whereas in *Spizaetus limnaetus* and *S. cirratus* the white-breasted birds are the young.

61. SCELOSTRIX CANDIDA.

The two Philippine birds to which I have referred (Ibis, 1866, p. 251) as being in the Derby Museum at Liverpool are, judging from the information sent me by Mr. T. J. Moore, probably distinct, andr eferable to "*Strix amauronota,* Cabanis" (J. f. O. 1866, p. 9), a species which, however, does not yet appear to be described.

72. KETUPA CEYLONENSIS.

Not only is *K. flavipes* "fully a third larger" than *K. javanensis,* as stated in a note (Ibis, 1866, p. 255), but the upper portion of its tarsus is clad with short downy feathers, which is not the case with *K. javanensis* or *K. ceylonensis.*

273. PERICROCOTUS BREVIROSTRIS. Capt. Beavan notes this species from "Maunbhoom" (Ibis, 1865, p. 419). In the note on this genus (Ibis, 1866, p. 369) the semicolon after "*P. ardens,* Boie," should be replaced by a comma, as *P. igneus* and *P. minutus* are identical with it.

291. LEUCOCERCA FUSCOVENTRIS (Ibis, 1866, p. 370). For Lesson *read* Franklin.

Genus MYIOPHONUS (vol. i. p. 501).

A synonym for the Chinese *M. cæruleus* is *M. brevirostris,* Lafresnaye (Rev. Zool. 1852, p. 460).

722. EUSPIZA LUTEOLA has a pleasing continuous warble, very unlike the monotonous song-notes of most Buntings. On hearing it in the Zoological Gardens I supposed that I was listening to some species of Lark, until I caught sight of the vocalist.

748. CALLACANTHIS BURTONI.

Some hybrids which I have lately seen, bred from the male *Carduelis elegans* and female *Pyrrhula europæa,* bear a curious resemblance to this Himalayan species.

760. PYRRHULAUDA GRISEA. Mr. Gould has a second Indian species of this genus, received from the Madras Presidency, very like the Nubian *P. cruciata* (Temm.), and which may therefore be designated

P. AFFINIS. Crown of the male black, with broad white forehead, and a small blackish spot on the nape, less developed than in the Nubian bird. A third species, from Aden, may be called

P. sincipitalis, nobis. Male like that of *P. grisea,* but with the crown and nape sooty-black, two white sincipital spots, a small white medial frontal spot, and the feathers impending the nostrils also white. This is, perhaps, the Arabian species assigned to *P. grisea.* I am indebted to Mr. Dresser for a specimen of this species. The females of all three are probably undistinguishable. There is a male of *P. affinis* in abraded plumage in the British Museum, also marked "from Madras." It is surprising that the Black-capped Indian *Pyrrhulauda* has not before been discriminated.

X.—*Notes on the Birds seen during a Voyage from London to New Zealand in* 1866. By Captain F. W. HUTTON, F.G.S.

LESTRIS CATARRHACTES (L.). We saw this species on ten occasions during the voyage, between lat. 37° S., long. 14° 36′ W., and lat. 45° 57′ S., long. 145° 37′ E., but never more than one bird at a time. They never stayed long about the ship. Once I saw it chase a *Thalassidroma melanogaster,* and at another time I saw one chase a *Procellaria gigantea*; but in neither case did the pursuer get any food by doing so. I have also seen this species settle quietly on the water to feed with the other birds.

DIOMEDEA EXULANS, L. First seen on April 5th, in lat. 34° 15′ S., long. 23° W.; and from this they accompanied us the whole way to New Zealand. They were not very numerous, and we never saw more than nine during one day. Several of the middle-aged birds had the pink mark (*cf.* Ibis, 1865, p. 278) under each ear, but others had not. One was caught in lat. 43° S., long. 101° E. with this mark; it was a male, measuring 10 feet across the wings, and weighing 16 lb. The fat on its breast was half an inch thick: it was caught at 8^h 30^m A.M., and its stomach was quite empty.

DIOMEDEA MELANOPHRYS, Boie. First seen on April 5th, earlier in the day than *D. exulans.* These birds also accompanied us the whole way. I only saw *D. chlororhynchus,* Lath., twice during the voyage, namely, on May 5th in lat. 41° 9′ S., long. 43° 7′ E., and again on June 3rd in lat. 42° 51′ S., long. 155° 17′ E.

DIOMEDEA FULIGINOSA, Gmel. A large number (about two dozen) of these birds came round the ship on the 8th April, when we were off the island of Tristan d'Acunha; after that they did not appear again until April 28th, in lat. 38° S., long. 23° E., on which day one was caught. It measured 6 feet 5 inches from tip to tip of its wings, and 2 feet 4 inches from the culmen of the beak to the point of the tail. From this time they continued with us until May 20th, in lat. 42° 23′ S., long. 97° 40′ E., after which date none were seen until June 2nd, in lat. 44° 27′ S., long. 150° 12′ E. On that and the two following days one or two followed the ship, the last being seen on June 4th in lat. 40° 48′ S., long. 157° 24′ E.

There is a very distinct variety of this bird, which, from its resemblance to the Hooded Crow I have called var. *cornicoides*. It is quite as common as the normal form, but inhabits rather different localities. The neck, back, and body are grey, with a broad black band round the beak; and the white mark on the lower mandible is very small. It is of the same size as the true *D. fuliginosa,* and the wings and tail are the same; but I have often fancied that its flight was not as graceful. We first saw this bird on April 14th in lat. 36° 28′ S., long. 2° 18′ E.; but it did not become common until May 5th, in lat. 41° 9′ S., and long. 43° 7′ E., from which date we saw from one to ten every day until June 6th, in lat. 37° 26′ S., and long. 163° 54′ E., when they disappeared. They vary a good deal in colour, from almost white on the back of the neck and shoulders, through all intermediate grades, up to that of *D. fuliginosa.* They got more and more white as we sailed eastward as far as about long. 86° E., when they again got darker and darker until we left them.

PROCELLARIA GIGANTEA, Gmel. First seen on April 24th, in lat. 37° 32′ S., long. 17° 48′ E., and then occasionally until we were off Cape Brett, New Zealand. I have never noticed one chasing another bird.

Procellaria æquinoctialis, L. This bird appeared first on April 3rd, in lat. 32° 35′ S., long. 26° 36′ W., after which it was seen every day until April 12th, lat. 35° 40′ S., long. 4° 28′ W.; from this time it disappeared until April 24th, lat. 37° 32′ S., long. 17° 48′ E. It was then common until May 6th, lat. 40° 52′ S., long. 46° 28′ E.; after this it was only occasionally seen until June 4th, lat. 40° 48′ S., long. 157° 24′ E.; it then accompanied us every day to New Zealand. The var. *conspicillata* of Gould was seen only between lat. 35° 32′ S., long. 18° 46′ W., and lat. 35° 40′ S., long. 4° 28′ W. I saw this bird in all stages of plumage, from that described by Linnæus to that figured by Mr. Gould as *P. conspicillata*. Those seen between Tasmania and New Zealand were probably another variety, if not a distinct species; they appeared smaller than the normal form, and had a white band all round the bill from the chin to the forehead, but none round the eyes. The bill seemed to be quite black. In appearance and manner of flight they seemed to me to connect *P. æquinoctialis* with *P. macroptera*.

Procellaria macroptera, Smith. First seen April 1st, in lat. 29° 48′ S., long. 26° 30′ W., and remained with us until May 10th, in lat. 40° 20′ S., long. 63° 30′ E. It was very common between lat. 36° 38′ S., long. 2° 18′ E., and lat. 34° 3′ S., long. 11° 2′ E.

Procellaria hæsitata, Licht. (*nec* Kuhl); *P. cinerea*, Gmel. First seen April 14th, lat. 36° 38′ S., long. 2° 18′ E., but did not become common until May 5th, lat. 41° 9′ S., long. 43° 7′ E. It was then seen every day until June 7th, lat. 36° 18′ S., long. 166° 33′ E. It was most common about lat. 46° S., long. 140° E., when from fifteen to twenty were seen every day for several days in succession.

Procellaria glacialoides, Smith. First seen May 14th, lat. 38° 30′ S., long. 73° 12′ E., and seen occasionally until May 29th, lat. 45° 5′ S., long. 132° 30′ E., but never more than one at a time.

Procellaria —— ?, sp. nov.? On April 21st and 22nd, in about lat. 36° S., and long. 16° E., we saw two or three

Petrels of a species that I have not seen described. It was about the size of *P. hæsitata*, Licht.; throat, back of the neck, breast, under the wings, and upper tail-coverts white; head, lower part of the neck, back, wings, and tail brown, the top of the head being the darkest part. We never saw this bird again.

Procellaria lessoni, Garnot. First seen April 14th in lat. 36° 38′ S., long. 2° 18′ E.; but was scarce until May 22nd, lat. 43° 14′ S., long. 102° 41′ E., from which date one or two were seen every day until we sighted New Zealand.

Procellaria mollis, Gould. First seen April 5th, lat. 34° 11′ S., long. 22° 52′ W., from which time it was common every day until May 10th, lat. 40° 20′ S., long. 63° 30′ E. It then disappeared until May 17th, lat. 39° 38′ S., long. 85° 36′ E., when one was seen each day for three days, taking its final departure on May 20th, lat. 42° 23′ S., long. 97° 40′ E. It was most numerous between lat. 35° 40′ S., long. 4° 28′ W., and lat. 39° 30′ S., long. 25° E.

Procellaria parvirostris, Peale? On several occasions, between the equator and lat. 33° S., we saw a bird much resembling the *P. parvirostris* of Peale. Its head, neck, back, wings, and tail were dark brown, and its breast, belly, and under surface white: the bill was black, and the bird appeared to be about three feet and a half across the wings. I am not aware that any bird answering to this description has been described as inhabiting the Atlantic. It can easily be distinguished from *P. mollis* by being white under the wings.

Daption capensis (L.) was first seen April 19th, lat. 34° 32′ S., long. 11° 28′ E.; but it did not become common until April 26th. This can only be accounted for by supposing that it does not return from its breeding-grounds until the end of April. A sailor on board told me that during his last voyage to Adelaide, where he arrived about the middle of March, he did not see one Cape-Pigeon the whole way. The same man also told me that he once took six or seven Cape-Pigeons alive as far as the English Channel, where, owing to a difference with the steward, who was part owner, he let them all fly away.

In this way we can easily account for *Diomedea exulans, D. chlororhynchus, P. gigantea,* and the present species having been found in European seas. These birds were kept in a large tub and fed with salt pork. Albatroses are often brought alive into the Australian ports. From April 26th Cape-Pigeons followed us to Cape Brett, New Zealand, coming within a few miles of the land. They were most numerous about June 2nd, in lat. 44° 27′ S., long. 150° 12′ E., on which date there were about sixty round the ship.

Prion vittatus (Gmel.). First seen April 7th, lat. 36° S., long. 17° 22′ W., and they accompanied us during the remainder of the voyage, sometimes being very numerous. On May 13th, lat. 38° 30′ S., long. 70° 50′ E., I estimated that there were more than a thousand round the ship. In my last paper (Ibis, 1865, p. 288) I was in error in saying that this bird never settles on the water; I have occasionally seen it do so for a few minutes.

Several species may be here included under this name, as I could not obtain any specimens; but I was not able to see any difference, and believe that *P. vittatus* is the commonest of the Prions.

Puffinus assimilis, Gould. On May 7th and 8th, when about three hundred miles north of the Crozets Islands, we saw six or eight of these birds: we did not see them again during the voyage, except one on May 9th, in lat. 45° 5′ S., long. 132° 30′ E.

Thalassidroma melanogaster, Gould. First seen April 6th, lat. 35° 32′ S., long. 18° 46′ W., and remained with us until May 20th, lat. 42° 23′ S. long. 97° 40′ E.; after this it was not seen until June 3rd, lat. 42° 51′ S., long. 155° 17′ E., whence it accompanied us nearly to New Zealand. From April 25th, lat. 38° S., long. 21° E, until May 5th, lat. 41° 9′ S., long. 43° 7′ E., these birds were very numerous, often forty or more together. I am not sure that I saw any *T. leucogaster*, Gould, although there were many *T. melanogaster* with very few dark feathers on their bellies, and every connecting link between these and the true *T. melanogaster*. *T. leucogaster* may, I think, therefore probably be only a variety of the other. This bird measures 17 inches across the wings, and 8 inches from the tip of its beak to the end of its tail.

THALASSIDROMA OCEANICA (Kuhl). This bird was seen several times in the northern temperate zone, but not in the tropics. It reappeared again in about 33° S., and continued common until May 2nd, lat. 39° 3′ S., long. 33° 9′ E., and was then only occasionally seen to May 18th, lat. 40° 40′ S., long. 88° 39′ E., on which date the last was seen.

THALASSIDROMA LEACHI, Temm.? A specimen of a Petrel about the size of *T. pelagica*, with head, neck, back, and breast dark slate-blue; upper tail-coverts white; wings, tail, and vent dark brown; tail forked when closed, square when expanded. This bird was caught on March 9th in lat. 14° N., long. 26° W.; unfortunately the captain of the ship witnessed its capture, and he was too superstitious to allow me to kill it. This bird followed us through the tropics, and as far, I think, as 36° S. It is probably distinct from *T. leachi*, as it is very different from the descriptions and figures of Gould, Meyer, and Morris; but I have never seen a specimen of *T. leachi**.

THALASSIDROMA PELAGICA (L.), var. vel sp. nov.? A variety of this bird, or perhaps a distinct species, was occasionally seen in the southern hemisphere south of 35° S. It differed principally in its larger size and in having a few white feathers under the wing. A specimen was obtained in lat. 38° S., long. 21° E.; it measured 14 inches across the wings, and 6·25 inches from the tip of its bill to the end of its tail.

On the evening of March 26th, lat. 23° 19′ S., long. 26° 30′ W., a Gannet (*Sula*) flew round the ship for several hours; and on April 22nd, lat. 36° 37′ S., long. 16° 33′ E., a Tern (*Sterna*) appeared.

Remarks.—During the voyage the following birds were either caught, marked, and let go again, or else some peculiarity was observed in them by which they could be recognized again:—March 9th, a *T. leachi* (?) caught and let go with a white ribbon round its neck. April 6th, an Albatros caught and let go with a red ribbon round its neck. April 7th, a young Albatros caught and let go with a blue ribbon round its neck. Saw an old Albatros that had lost the second feather of its right wing, also a young one with only one leg. April 16th, saw a *P. mollis* with a white spot near the point of the right wing, also a young Albatros with a broken feather in its left wing. April 26th, saw a *D. melanophrys* with the last joint of its right wing broken. May 1st, saw a *D. fuliginosa* that had rubbed off the feathers from its right wing near the shoulder, and another that had lost the two middle feathers of its tail. May 2nd, caught a *T. melanogaster*; let it go with a green ribbon round its neck. May 3rd, caught a *T. melanogaster*; let it go with a red ribbon round its neck. May 7th, saw a *D. fuliginosa* that had lost a feather from the middle of its right wing. May 15th, caught a Cape-Pigeon; let it go with a red ribbon round its neck. June 3rd, saw a *D. chlororhynchus* that had lost a feather from the middle of its left wing. None of these birds were seen again during the voyage*.

---

* [The bird described by our contributor seems to have very much resembled *Procellaria furcata*, Gmel.; but we never before heard of this species occurring in the Atlantic.—ED.]

Birds are often seen in the morning which leave the ship in the course of the day; and I think therefore that it may be safely inferred that for birds to follow a ship for several days together is the exception, and not the rule. If this be admitted there will be no difficulty in allowing them to sleep at night whether in the air, on land, or on the water. That the first is impossible I showed in my former paper (Ibis, 1865, pp. 294–295), and the distance of the land would generally put the second out of the question; the third therefore alone remains probable. The occasional roughness of the water can be no objection; for these birds seem just as much at home sitting on the water in the heaviest gale with the foam flying over them as when floating calmly on a mirror-like sea; and during the voyage I made the following observations, which tend to corroborate this view:—

---

* [Some of these experiments are perhaps inconclusive; for it seems just possible that the decorations may have had the effect of frightening the wearers to death. I have known the case of a Raven—a bird certainly not less courageous than a Petrel—caught by a shepherd and liberated unhurt, but with a white fillet hung loosely round its neck. That bird was never seen again alive. Some days after, I found its dead body, on which there was not the slightest trace of any injury.—A. N.]

On the 22nd April at 6 P.M., about three-quarters of an hour after sunset, we passed five of *Diomedea melanophrys* sitting close together on the water, although we had only seen one before during the course of the day. As the ship came near them they all rose together like a covey of Partridges, evidently frightened, and flew straight away—although they often alight much closer to the ship than they were when they got up. I feel pretty sure that these birds were settled for the night.

Again, on the afternoon of the 25th April we passed a *P. æquinoctialis* apparently asleep on the water. When the ship came near him he took his head from under his wing and stared at us, but did not get up. This bird might have been only preening his feathers; but I think that he was asleep, for the Cape-Pigeon (*Daption capensis*) is the only Petrel that I have seen preen its feathers on the water.

Again, early on the morning of the 29th April I saw a *D. melanophrys* sitting on the water ahead of the ship. When we came up to it, it got up and followed us; and as it is very unusual to see them in the water except astern of the ship, I think it is likely that it had slept there. Again, on the 11th May at 9 A.M. we passed five of *D. fuliginosa* var. *cornicoides* sitting on the water; two got up as the ship passed, one settled down again, and the other followed the ship.

I also took some pains to ascertain whether any birds followed the ship at night, and found that, as a general rule, no birds were in sight at daybreak, and few before 8 o'clock A.M.; after this their number gradually increased until the afternoon, when they were generally most numerous. At sunset they began to disappear, few remaining after 7 P.M., and seldom any after 8 P.M., and it is rare to see one after 10 P.M. Sometimes, however, on bright moonlight nights, Cape-Pigeons, when they have been numerous during the day, are seen flying round the ship all night; and two or three were caught during the middle watch; but they always disappear about 4 A.M. On the night of June 2nd, I estimated that there were about a dozen Cape-Pigeons flying round the ship at midnight, while during the day there had been between fifty and sixty of them, besides other birds. I have also seen many bright moonlight nights when no birds were to be seen after 9 P.M.

With regard to the flight of these birds I have little to add, except that I have sometimes noticed them use their feet in the air both for propulsion and steering; but I do not attribute much importance to this.

The Storm-Petrels certainly keep up their velocity by striking the water with their feet; and I have seen both *D. exulans* and *D. fuliginosa* rise from the water without once flapping their wings, the impetus being obtained by the feet alone.

I have seen the Albatros in all temperatures between 46° and 73° Fahr., and could detect no difference in its flight from this cause.

Auckland, New Zealand, 1866.

XI.—*Notes on Birds collected near Hakodadi in Northern Japan.*

By Henry Whitely, Junior.

(Plate III.)

I LEFT England in the month of March 1864 to join Captain Blakiston at Hakodadi in the island of Yesso, in the north of Japan, my intention being to remain there several years and work up, as far as lay in my power, the fauna of that little-known part of the world. Circumstances, however, happened which shortened my stay, and must therefore be my excuse that the list of birds now presented to the readers of 'The Ibis' is not more extensive. Among them, however, will be found several that are of much interest, and many that have never been recorded from that locality before. As Captain Blakiston has already written an account of Hakodadi and the surrounding district*, it is unnecessary for me to say anything on that subject.

In the winter large numbers of Gulls frequent the bay; but there do not appear to be many species—some few Terns and a Gull, with a slate-coloured back, white belly, and black-tipped wings (which turned out to be *Larus melanurus*), and also a Gull perfectly white, of which I could never obtain a specimen. In the harbour, as the weather gets severe and the fresh water begins to be frozen over, large numbers of Ducks congregate, among which may be mentioned the Harlequin and Long-tailed Ducks, Common and Velvet Scoters. The Black-throated Diver is common, but difficult to get at.

---

* Ibis, 1862, pp. 312–314.

Of the Auks I observed but two species, *Ceratorhyncha monocerata* and *Uria antiqua*, both of which are common. With respect to the breeding-habits of the numerous species that pass the summer in Northern Japan I can say but little, my time at that season of the year being occupied in entomological pursuits. In this branch of study there is here a wide field for some future explorer.

1. Falco peregrinus, Linn.; *F. communis*, T. & S., Faun. Jap. p. 1; Blakiston, Ibis, 1862, p. 314.

Of my two specimens of this Falcon, one was captured on board the schooner 'Kankai' during a passage from Nagasaki to Hakodadi, the other was obtained from a native bird-catcher at Hakodadi, Nov. 17th, 1865.

Length 19 in., wing 14·06 in.

2. Accipiter nisus (Linn.); *Astur nisus*, T. & S., Faun. Jap. p. 4; Blakiston, Ibis, 1862, p. 314.

One specimen only, shot at Hakodadi, Nov. 25, 1864.

Length 15 in., wing 9·75 in.

3. Milvus melanotis, T. & S., Faun. Jap. p. 14, pl. 5; Blakiston, Ibis, 1862, p. 314.

Most of my specimens of this Kite were obtained at Hakodadi in October 1864. If after having killed one of these birds it is allowed to remain on the ground, it will soon be surrounded by others, and five or six can be easily shot in a few minutes.

4. Syrnium rufescens (T. & S.), *Strix rufescens*, Faun. Jap. p. 30; *S. fuscescens*, op. cit. p. 137, pl. 10.

I obtained one specimen only, from a Japanese bird-catcher, December 1865.

5. Asio otus (Linn.).

No difference can be detected between my specimens of this bird, which were obtained at Hakodadi from a native bird-catcher, and those of Europe.

6. Asio brachyotus (Linn.).

Two specimens obtained at Hakodadi from native bird-catchers.

7. Caprimulgus jotaka, T. & S., Faun. Jap. p. 37, pls. 12, 13.

One specimen only was obtained at Hakodadi from a native bird-catcher, Oct. 24th, 1864.

8. Cuculus canorus, Linn.; T. & S., Faun. Jap. p. 138, note; Blakiston, Ibis, 1862, p. 325.

This bird is a summer visitant to Hakodadi; and I was much delighted when I heard its well-known call, as it reminded me of scenes far away. My specimen is a young bird, obtained Sept. 25th, 1865.

Length 12 in., wing $7\frac{3}{4}$ in. Bill black on upper mandible, yellowish-green tipped with black on lower; inside of mouth orange; eye dark hazel; eyelid chrome-yellow; legs and toes light chrome-yellow. Stomach contained remains of large grasshoppers.

9. Gecinus canus (Gmel.); Blakiston, Ibis, 1862, p. 325.

Common in the large forests in the vicinity of Hakodadi. Of my three specimens one was a male, the other two females.

10. Picus uralensis, Malherbe, Monogr. Pic. i. p. 92, pl. 23; *P. leuconotus*, Blakiston, Ibis, 1862, p. 325.

This beautiful Woodpecker is by no means scarce in the forests near Hakodadi. I shot several specimens of it in October and November 1865.

11. Picus major, Linn.; Blakiston, Ibis, 1862, p. 325.

Of the species of Woodpeckers seen at Hakodadi this is the most common, and frequents all the large forests and woods in the neighbourhood. I obtained a number of specimens.

12. Alcedo bengalensis, Gmel.; T. & S., Faun. Jap. p. 76, pl. 38; Blakiston, Ibis, 1862, p. 325.

One specimen (a female) only, obtained at Hakodadi, Sept. 24, 1865, from a native bird-fancier, from whom I learned that it had been caught up a creek near the village of Kamida, a few miles from the town. It is most probably a scarce bird, as this is the only instance in which I know of its capture.

Length 6·12 in., wing 2·87 in. Bill black; eye black; legs and feet Indian-red.

13. Hirundo javanica, Sparrmann; Blakiston, Ibis, 1862, p. 316; *H. rustica*, T. & S., Faun. Jap. p. 31.

My specimen of this Swallow was obtained at Hakodadi, May 15th, 1865.

Length 6 in., wing 4·62 in.

14. Chelidon blakistoni, Swinhoe, Ibis, 1863, p. 90; *Hirundo urbica*, Blakiston, Ibis, 1862, p. 316.

This bird is by no means common at Hakodadi. I obtained but two specimens, shot April 17th, 1865.

Length 5 in., wing 4·25 in. Bill black; eye dark hazel; claws brown.

15. Certhia familiaris, Linn.

Common in the woods and plantations. No difference can be detected between my specimens from Hakodadi and those of Europe.

16. Sitta europæa, Linn. (nec *S. cæsia**); *S. roseilia*, Blakiston, Ibis, 1862, p. 322; *S. uralensis*, Id. Ibis, 1863, p. 99.

Found in great numbers in the woods near Hakodadi, where my specimens were obtained in October and November 1865, the locality and time of year being the same as in the case of the specimen mentioned in Captain Blakiston's paper, as above quoted. What is the difference between *S. europæa* and *S. uralensis*? I can find no distinction between my specimens of this bird (which agree with that obtained by Captain Blakiston) and *S. europæa*.

17. Regulus japonicus, Bp., Compt. Rend. 28 April,

---

* *Cf.* 'Ibis,' 1865, p. 309.

1856, xlii. p. 767; Swinhoe, P. Z. S. 1863, p. 336; *R. cristatus*, T. & S., Faun. Jap. p. 70; *R. japonensis*, Blakiston, Ibis, 1862, p. 320.

Four specimens were obtained at Hakodadi, in a pine-wood, three in October 1864, and one on November 14th, 1865. This bird seems to differ very little, either in appearance or habits, from the *R. cristatus* of Europe.

Length 3·75 in., wing 2·25 in.

18. Ficedula coronata, T. & S., Faun. Jap. p. 48, pl. 18; *Phyllopneuste coronata*, Blakiston, Ibis, 1862, p. 317.

A common summer resident at Hakodadi.

Length 4·75 in., wing 2·37 in.

19. Pratincola indica, Blyth; Swinhoe, P. Z. S. 1863, p. 291; *Saxicola rubicola*, T. & S., Faun. Jap. p. 58.

I observed this bird in numbers in the swampy grounds near Hakodadi. My specimens were obtained in May 1865, and vary much in size, no two being alike in length.

Length from 4·62 to 5·25 in., wing from 2·62 to 2·75 in.

20. Ianthia cyanura (T. & S.); Swinhoe, P. Z. S. 1863, p. 290; *Lusciola cyanura*, Faun. Jap. p. 54, pl. 21; *Nemura cyanura*, Blakiston, Ibis, 1862, p. 318.

One specimen only, obtained November 6th, 1864, in the scrub near Hakodadi Head.

Length 5·5 in., wing 3 in.

21. Salicaria cantans, T. & S., Faun. Jap. p. 51, pl. 19.

Of this bird I secured two specimens, both shot in the brushwood near Hakodadi Head, respectively in April and May 1865. The song is very similar to that of our Garden-Warbler (*Sylvia hortensis*).

Length 6 in., wing 2·62. Bill warm sepia; eye dark hazel; legs and feet hazel-brown.

22. Salicaria cantillans, T. & S., Faun. Jap. p. 52, pl. 20; Blakiston, Ibis, 1862, p. 318.

Common in the plantations at Hakodadi. A specimen obtained May 4th, 1865, measured 5 in., wing 2·25 in.

23. Accentor rubidus, T. & S., Faun. Jap. p. 69, pl. 32.

Two specimens only of this rare bird were obtained by me at Hakodadi,—the first on October 28th, 1865, from a native bird-catcher, which I had endeavoured to procure some little time before whilst it was alive; but the price asked, viz. two boos (4*s.*), was too much. The man told me it was the first he had ever obtained. The second (a male) was shot on November 14th, 1865, off a bramble-bush near the pine-wood at the foot of Hakodadi Head. In its habits it is evidently very shy and retiring, and it was only by patiently watching the bramble-bush that I was at last able to get a clear shot at it.

Length 5·75 in., wing 2·69 in. Bill brownish-black; eye yellowish-hazel; legs, toes, and claws pale brown.

24. Parus minor, T. & S., Faun. Jap. p. 70, pl. 33.

Very common in woods in the neighbourhood of Hakodadi.

25. Parus ater, Linn.; Blakiston, Ibis, 1862, p. 321.

I obtained several specimens. It is common in the woods in the neighbourhood of Hakodadi. No specific difference can be discovered between this bird and the *Parus ater* of Europe.

Length 4 in., wing 2·37 in.

26. Parus kamtschatkensis, Bp., Consp. Av. i. p. 230; Blakiston, Ibis, 1862, p. 321.

Several specimens were obtained—one in November 1864, the others November 1865. It is by no means scarce in the woods and large forests near Hakodadi.

Length 4·25 in., wing 2·62 in. Bill black; eye dark hazel; legs and toes bluish lead-colour.

27. Motacilla lugens, T. & S., Faun. Jap. p. 60, pl. 25; Blakiston, Ibis, 1862, p. 319.

A number of these birds were shot on the 18th and 19th April, 1865, on the beach near the east point of Hakodadi Head.

Length from 7·37 to 7·87 in., wing from 3·62 to 4 in.

28. Anthus japonicus, T. & S., Faun. Jap. p. 59, pl. 24.

One specimen only shot at Hakodadi, October 16th, 1865. There was another in company with it, which escaped.

29. Turdus cardis, T. & S., Faun. Jap. p. 65, pl. 29; Blakiston, Ibis, 1862, p. 319.

Several specimens were shot at Hakodadi in May 1865.

30. Turdus daulias, T. & S., Faun. Jap. p. 62, pl. 26.

This is rather a rare Thrush. I obtained only one specimen at Hakodadi.

31. Turdus chrysolaus, T. & S., Faun. Jap. p. 64, pl. 28.

Common at Hakodadi, congregating in large flocks in the winter.

32. Petrocincla manillensis (Bodd.); Swinhoe, P. Z. S. 1863, p. 281; *Turdus manillensis,* T. & S., Faun. Jap. p. 67.

This bird frequents the rocky shore near the east point of Hakodadi Head, where I obtained three specimens (males), April 17th, 1865. It has a habit of perching on the roofs of houses.

Length 8·75 in., wing 5·12 in. Bill black; eye dark hazel; legs, toes, and claws black.

33. Microscelis amaurotis (T. & S.); *Turdus amaurotis,* Blakiston, Ibis, 1862, p. 320; *Orpheus amaurotis,* Faun. Jap. p. 68, pl. 31, b.

Two specimens only obtained at Hakodadi in an orchard. It has a peculiarly dismal note.

Length 10·87 in., wing 5·1 in. Eye dark hazel.

34. Muscicapa cinereoalba, T. & S., Faun. Jap. p. 42, pl. 15; Blakiston, Ibis, 1862, p. 317.

One specimen only obtained in a plantation near Hakodadi, September 24th, 1865. Its habits appear to be those of our common Flycatcher (*M. grisola*).

Length 4·87 in., wing 3·75 in.

35. Muscicapa cyanomelæna, T. & S., Faun. Jap. p. 47; *M. melanoleuca,* op. cit. pl. 17.

One specimen only of this richly coloured bird was obtained at Hakodadi, November 2nd, 1865, from a native bird-catcher, who had evidently, from the damaged state of its plumage, kept it confined for some time.

36. Ampelis phœnicoptera (T. & S.), Faun. Jap. p. 84, pl. 44.

One specimen only, shot in a plantation near Hakodadi, November 28th, 1865.

Length 6·87 in., wing 4·25 in. Bill black; legs, toes, and claws black.

37. Lanius bucephalus, T. & S., Faun. Jap. p. 39, pl. 14; Blakiston, Ibis, 1862, p. 317.

My two specimens of this bird were shot in an orchard at Hakodadi, on June 1st and July 2nd, 1865, respectively. It is not a common bird here, as I observed but five specimens.

Length 7·5 in., wing 3·5 in. Bill bluish horn-colour; eye dark brown; legs and toes bluish-black.

38. Corvus japonensis, Bp., Consp. Av. i. p. 386; *Corvus macrorhynchus*, T. & S., Faun. Jap. p. 79, pl. 39 b; Blakiston, Ibis, 1862, p. 325.

Many specimens of this bird were obtained at Hakodadi. It has more the appearance of a Raven than of a Crow, but congregates in flocks. It is a frequent visitor to the fishing-villages on the coast, no doubt attracted by the refuse of the fish, which is deposited on the shore by the fishermen.

39. "Garrulus brandti, Eversm.," Hartl., Rev. Zool. 1845, p. 52; Bp., Consp. Av. i. p. 376; Blakiston, Ibis, 1862, p. 326. (Plate III.) *

My specimens of this bird were obtained in October 1865. It is common in the woods in the neighbourhood of Hakodadi. Varies a good deal in size.

Length from 12·87 to 14 in., wing from 6·62 to 7 in.

40. Sturnus cineraceus, T. & S., Faun. Jap. p. 85, pl. 45.

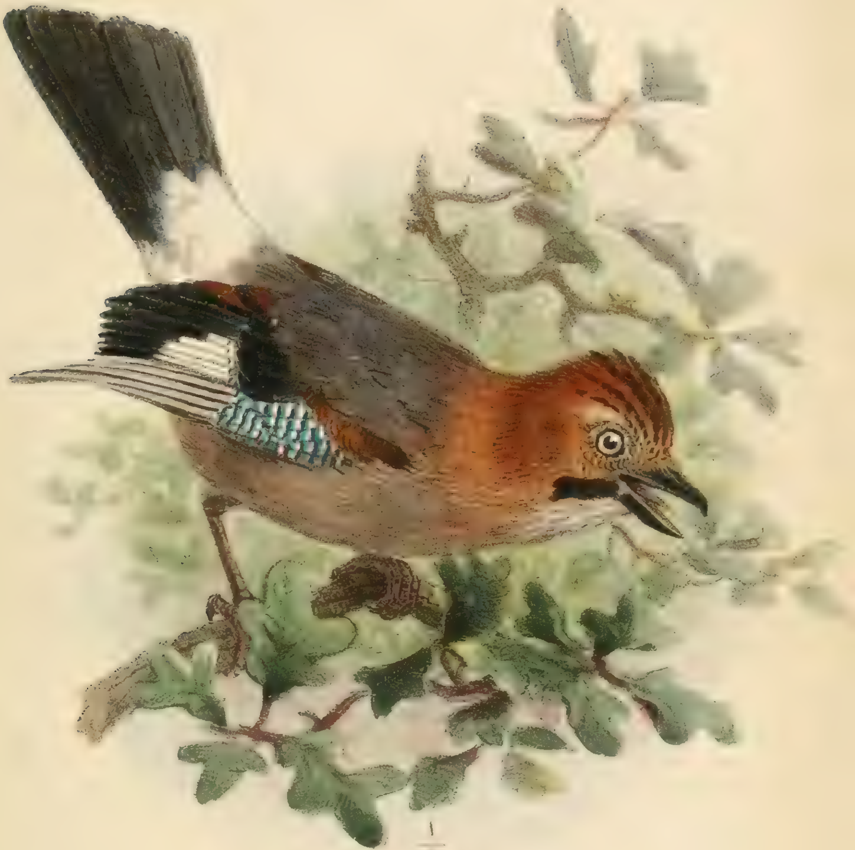
This bird is common in the woods near Hakodadi, and I obtained several specimens of it in April 1865. In its habits it closely resembles the *S. vulgaris* of Europe, but the call-note is different.

♂. Length 9 in., wing 5·06 in. ♀. Length 8·5 in., wing

---

* [As this fine species does not appear to have been figured, we take this opportunity of giving a representation of it from one of Mr. H. Whitely's specimens.—Ed.]

[illegible]



J Wolf del & lith

M & N Hanhart imp

GARRULUS BRANDTI

5 in. Bill orange-yellow; inside of mouth purplish slate-colour; eye reddish-hazel; legs and feet orange-yellow.

41. Pastor pyrrhogenys, Müll.; Bp. Consp. Av. i. 418; *Lamprotornis pyrrhopogon*, T. & S., Faun. Jap. p. 86, pl. 46; Blakiston, Ibis, 1862, p. 327.

This bird may be seen in small parties in the summer in the plantations and orchards at Hakodadi. It also frequents the neighbourhood of dwelling-houses.

Length 6·75 in., wing 4·5 in. Bill dark lead-colour; eye brown; legs and feet bluish horn-colour.

42. Coccothraustes japonicus, T. & S., Faun. Jap. p. 90, pl. 51.

One specimen only (a male) obtained at Hakodadi in a plantation.

Length 6·75 in., wing 4 in. Bill horn-colour; legs and toes flesh-colour.

43. Coccothraustes personatus, T. & S., Faun. Jap. p. 91, pl. 52.

One specimen only (a male) shot in a wood at the back of the British Consulate at Hakodadi. It is rather a powerful bird, as, although very badly shot, it flew nearly 300 yards before it fell.

Length 8·75 in., wing 5·25. Bill—upper mandible yellow, marked with dark-green streaks towards the crown of the head; lower mandible yellow, with a slight tinge of green; legs and feet greenish flesh-colour; eye light hazel.

44. Fringilla montifringilla, Linn.; T. & S., Faun. Jap. p. 87.

I have observed this bird in small parties in the winter. My specimens were obtained in January and February 1865.

Length 5·5 in., wing 3·37 in.

45. Chrysomitris spinus (Linn.); Blakiston, Ibis, 1862, p. 327; *Fringilla spinus*, T. & S., Faun. Jap. p. 89.

Two specimens obtained—one in December 1864, the other in November 1865. Common in the plantations and woods near Hakodadi. It is a favourite cage-bird among the Japanese.

Length 4·5 in., wing 2·75 in.

46. Chlorospiza kawarahiba (T. & S.), Faun. Jap. p. 88, pl. 48.

This bird is rare. I obtained but one specimen (a female) at Hakodadi, October 13, 1865.

Length 5·75 in.; wing 3·5 in.

47. Chlorospiza sinica (L.); *Fringilla kawarahiba minor*, T. & S., Faun. Jap. p. 89, pl. 49; *Ligurinus sinicus*, Blakiston, Ibis, 1862, p. 327.

This bird is common in the plantations and woods at Hakodadi. I obtained many specimens of both sexes.

Length 5·12 in., wing 3·25 in.

48. Passer montanus (Linn.); T. &. S., Faun. Jap. p. 89; Blakiston, Ibis, 1862, p. 327.

Common at Hakodadi. Frequents houses and out-buildings.

Length 5·5 in., wing 2·75 in.

49. Leucosticte brunneinucha (Brandt); Bp., Consp. Av. i. p. 536.

Four specimens obtained, two males and two females, in February 1865. Large flocks of these birds are seen in the winter at Hakodadi, but they are exceedingly wild.

Length 6·75 in., wing 4·75 in. Bill yellow-ochre; legs and feet lead-colour.

50. Emberiza fucata, T. & S., Faun. Jap. p. 96, pl. 57; Blakiston, Ibis, 1862, p. 328.

This bird is rather common at Hakodadi. My specimens were shot in October 1865.

Length 6 in., wing 3 in. Bill brown; eye dark hazel; legs and toes brownish flesh-colour.

51. Emberiza rustica, Pall.; T. & S., Faun. Jap. p. 97, pl. 58; Blakiston, Ibis, 1862, p. 328.

A specimen shot at Hakodadi, October 20th, 1865, measured 5·62 in., wing 3·12 in. Bill reddish-brown; eye dark hazel; legs and toes brownish flesh-colour.

52. Emberiza ciopsis, Bp., Consp. Av. i. p. 466; *E. cioides*, T. & S., Faun. Jap. p. 98, pl. 59; Blakiston, Ibis, 1862, p. 328.

Several specimens of this bird were obtained. It is common in the woods and orchards at Hakodadi.

Length 6 in., wing 3 in. Bill bluish horn-colour; eyes dark hazel; legs and toes dusky flesh-colour.

53. Euspiza sulphurata (T. & S.), Swinhoe, P. Z. S. 1863, p. 300; *Emberiza sulphurata*, Faun. Jap. p. 100; *E. sulphurea*, op. cit. pl. 60.

Two specimens only were obtained at Hakodadi, October 21st, 1864. In its habits it is shy and retiring, and when disturbed flies but a short distance. Stomach contained seeds.

54. Alauda japonica, T. & S., Faun. Jap. p. 87, pl. 47; Blakiston, Ibis, 1862, p. 327.

This Lark is common at Hakodadi. It seems more closely allied to the Woodlark of Europe (*A. arborea*) than to the Skylark (*A. arvensis*), on account of its frequently perching on trees and low bushes. Most of my specimens were obtained in October 1864.

Length 6·5 in., wing 4·12 in.

55. Pyrrhula orientalis, Bp.; T. & S. Faun. Jap. p. 91, pl. 53; Blakiston, Ibis, 1862, p. 328.

This bird was observed in great numbers, and I obtained a fine series of specimens. While out in pursuit of them on March 3rd, 1865, I shot as many as nineteen in an orchard in the course of an hour. The bird was not observed by me during the summer months in the neighbourhood of Hakodadi.

Length varies from 5·87 to 6·12 in., wing from 3·25 to 3·37 in.

56. Uragus sanguinolentus (T. & S.), Bp., Consp. Av. i. p. 529; Blakiston, Ibis, 1862, p. 328; *Pyrrhula sanguinolenta*, Faun. Jap. p. 92, pl. 54.

Two specimens only obtained at Hakodadi—one (a male) November 4th, 1864, in the scrub near Hakodadi Head, the other (a female) October 19th, 1865. This latter was in company with a small flock.

♂. Length 5·25 in., wing 2·62 in. ♀. Length 5·25 in., wing 2·37 in. Bill horn-brown; eye dark hazel; legs and toes horn-brown.

57. Vinago sieboldi, T. & S., Faun. Jap. p. 102, pl. 60, d.

One specimen only, obtained in a plantation near Hakodadi, October 8th, 1865.

Length 12·37 in., wing 7·25 in. Bill blue slate-colour; toes flesh-colour.

58. Turtur rupicola (Pall.); Swinhoe, P. Z. S. 1863, p. 306; *Columba gelastis*, T. & S., Faun. Jap. p. 100, pl. 60, b.

Of this bird I obtained two specimens:—one in a plantation at Hakodadi, June 1st; the other shot in the Aino burial-ground at Moli-ri, a small village about fourteen miles from Hakodadi, November 2nd, 1865.

Length 11·5 in., wing 7 in. Bill olive-brown; eye reddish-hazel; legs and toes pink.

59. Coturnix japonica, T. & S., Faun. Jap. p. 103, pl. 61.

This bird is by no means scarce on the stubble-fields in the neighbourhood of Hakodadi. The two specimens I obtained were shot on the 13th of October 1865, when I saw about twelve of these birds, some small and evidently young ones.

Length 7·5 in., wing 4 in. Bill slate-colour; eye dark brown; legs and toes flesh-colour.

60. Bonasia sylvestris, Brehm; Blakiston, Ibis, 1862, p. 329.

I obtained three specimens (an adult male and female, and a young male) of this bird from native bird-catchers. It is found in the large forests in the neighbourhood of Hakodadi.

Length 14·12 in., wing 6·5 in. Bill dark horn-colour; over eye vermilion; legs and toes slate-colour.

61. Platalea major, T. & S., Faun. Jap. p. 119, pl. 75.

My specimen of this Spoonbill was obtained from a native bird-catcher, October 13th, 1864; and although this is the only one I saw during my residence at Hakodadi, I have no doubt but it frequents the large lakes and marshes in the neighbourhood.

62. Charadrius orientalis, T. & S., Faun. Jap. p. 104, pl. 62.

Although this is by no means a rare bird, I never had the opportunity of seeing one alive, all my three specimens having been bought of native dealers in Wild Ducks, Grouse, and the like, on the 24th of Sept. and the 3rd of Oct. 1865, respectively.

Length 9·37 in., wing 6·5 in.

63. NUMENIUS MAJOR, T. & S., Faun. Jap. p. 110, pl. 66.

One specimen only of this fine bird obtained from a native at Hakodadi, September 25th, 1865.

Length 33·75 in., wing 11·75 in. Bill reddish slate-colour; legs and toes bluish slate-colour; claws black.

64. TOTANUS PULVERULENTUS, T. & S., Faun. Jap. p. 109, pl. 65.

Shot on the beach near the east point of Hakodadi Head. There was a small flock of them, and when fired at they flew round in a half circle, first going out to sea and then taking a beautiful curve in towards the beach.

Length 10·12 in., wing 6·5 in. Bill dark brownish slate-colour; eye black; legs and toes yellow-ochre; claws black.

65. TOTANUS GLAREOLA (L.); T. & S., Faun. Jap. p. 110.

One specimen only obtained at Hakodadi, November 4th, 1864, from a native bird-catcher.

66. TRINGA ACUMINATA (Horsfield); *Totanus acuminatus*, Horsf., Linn. Trans. xiii. p. 192; Swinhoe, P. Z. S. 1863, p. 316.

Two specimens were obtained,—one from a native bird-catcher, September 26th, 1865; the other was shot on a large swamp at Kamida, a small village near Hakodadi, October 18th, 1865. When disturbed it raised its head and looked cautiously about, but not seeing anything to alarm it commenced again digging its bill into the soft earth.

♂. Length 8·5 in., wing 5·37 in. ♀. Length 7·75 in., wing 5 in. Bill black; eye chocolate-colour; legs and toes yellow-ochre.

67. TRINGA ALPINA, Linn.; Blakiston, Ibis, 1862, p. 330; *T. variabilis*, T. & S., Faun. Jap. p. 108.

Two specimens obtained:—one in November 1864 of a native bird-catcher; the other shot by Capt. Blakiston, January 26th, 1865, during a trip we made to Nannyabama, a small village about six miles round the bay from Hakodadi. It was quite alone.

Length 8·37 in., wing 4·75 in.

68. Tringa minuta, Leisler.

I observed this bird in small flocks on the sea-shore at Hakodadi in the autumn. My two specimens were shot Sept. 24th, 1864.

Length 5·75 in., wing 3·87 in.

69. Scolopax rusticola, Linn.; T. & S., Faun. Jap. p. 112.

My specimen of this bird was obtained at Hakodadi, Oct. 6th, 1865, from a native bird-catcher. I saw several others, but, owing to the damaged state of the plumage, could not preserve them. In my rambles near Hakodadi I have sometimes flushed a Woodcock in one particular clump of trees, but was never fortunate enough to shoot it. It was at this one spot only that I ever observed it.

Length 13·75 in., wing 9·5 in.

70. Gallinago australis (Lath.); Swinhoe, Ibis, 1863, p. 444; *G. solitaria*, T. & S., Faun. Jap. p. 112, pl. 68; Blakiston, Ibis, 1862, p. 331.

My specimen was obtained from a native bird-catcher, September 25th, 1865. Common at Hakodadi.

Length 12·25 in., wing 5·37 in.

71. Gallinago media, Leach; *G. gallinago*, T. & S., Faun. Jap. p. 112.

One specimen obtained at Hakodadi from a native bird-catcher, September 24th, 1865.

Length 11·12 in., wing 5·25 in.

72. Gallinago gallinula (L.); T. & S., Faun. Jap. p. 112.

My specimen of this bird, which was the only one I ever saw at Hakodadi, was obtained from a native bird-catcher, Oct. 3rd, 1865.

Length 8 in., wing 4·06 in.

73. Rallus aquaticus, Linn.; T. & S., Faun. Jap. p. 122; Swinhoe, P. Z. S. 1863, p. 322.

I have met with this bird in some numbers on the marsh-lands at Hakodadi, where it evidently breeds, as I have found it at all seasons of the year.

74. Anas zonorhyncha, Swinhoe, Ibis, 1866, p. 394; *A. pœcilorhyncha*, T. & S., Faun. Jap. p. 126, pl. 82.

During my residence at Hakodadi I saw but one specimen of this Duck, which I fortunately obtained from a native bird-catcher October 21st, 1865. It was a female.

Length 21·75 in., wing 9 in. Bill black, marked with orange; legs and toes orange.

75. Mareca penelope (Linn.); *Anas penelope*, T. & S., Faun. Jap. p. 127.

Common at Hakodadi. One specimen obtained October 3rd, 1865.

Length 18 in., wing 9·75 in.

76. Dafila acuta (Linn.); *Anas acuta*, T. & S., Faun. Jap. p. 128.

My specimen of this bird was obtained at Hakodadi, Oct. 15th, 1865, from a native bird-catcher.

Length 19·25 in., wing 9·5 in.

77. Querquedula crecca (Linn.); *Anas crecca*, T. & S., Faun. Jap. p. 127.

Two specimens only of this rather common Teal were preserved by me. Both were bought of native bird-catchers, one in October 1864, the other on November 10th, 1865.

Length 13·75, wing 7 in.

78. Aix galericulata (Linn.); *Anas galericulata*, T. & S., Faun. Jap. p. 127.

Five specimens were obtained at Hakodadi, in March, September, and October 1865, of native bird-catchers. Although I never had the pleasure of seeing this bird in its wild state, I was informed that it was numerous at times on the large lakes near Hakodadi.

79. Spatula clypeata (Linn.); *Anas clypeata*, T. & S., Faun. Jap. p. 128.

One specimen only, a female, obtained at Hakodadi from a native bird-catcher, October 20th, 1864.

Length 21·25 in., wing 9·5 in.

80. Fuligula marila (Linn.).

Some specimens shot in Hakodadi harbour, May 1865. This was the only Duck I observed at Hakodadi in May.

Length 17·25 in., wing 8·37 in.

81. Harelda glacialis (Linn.).

Several specimens were obtained at Hakodadi in January 1865 from native bird-catchers. Common in the harbour in the winter.

♂. Length 22·62 in., wing 9·12 in. ♀. Length 15 in., wing 8·25.

82. Clangula glaucion (Linn.); *Anas clangula*, T. & S., Faun. Jap. p. 128.

Two specimens (male and female) shot in Hakodadi harbour, December 23rd, 1864.

83. Clangula histrionica (Linn.); *Anas histrionica*, T. & S., Faun. Jap. p. 129.

One specimen only, shot in Hakodadi harbour, Dec. 29th, 1864.

Length 16·5 in., wing 7·5 in.

84. Œdemia fusca (Linn.).

Two specimens obtained:—one (a male) bought of a native bird-catcher, December 24th, 1864; the other shot by Capt. Blakiston in Hakodadi harbour, January 28th, 1865.

Length 19 in., wing 9·87 in.

85. Colymbus septentrionalis, Linn.

One specimen only, obtained at Hakodadi, January 1865, from a native bird-catcher.

86. Colymbus arcticus, Linn.; T. & S., Faun. Jap. p. 123.

Common in Hakodadi harbour, but difficult to approach, on account of its shyness. One specimen obtained February 1865.

87. Podiceps cristatus (Linn.); T. & S., Faun. Jap. p. 123.

Two specimens only obtained:—one bought from a native bird-catcher, November 27th, 1864; the other shot in Hakodadi harbour, December 1st, 1854.

Bill—upper mandible slate-colour, approaching to brown at base; lower mandible slate-colour at the tip, yellow-ochre at the base; eye light pink.

88. Podiceps auritus (Linn.); (*P. cornutus*, auctt.).

One specimen only, shot in Hakodadi harbour, January 26th, 1865.

Length 14·62 in., wing 5·75 in. Bill slate-colour; feet slate-colour on the outside, much darker on the inner side; membrane of toes black.

89. Podiceps nigricollis (Gmel.); *P. auritus*, T. & S., Faun. Jap. p. 123; Swinhoe, P. Z. S. 1863, p. 322.

One specimen obtained in Hakodadi in the winter of 1865.

90. Ceratorhyncha monocerata (Pall.); Swinhoe, P. Z. S. 1863, p. 330; *Alca monoceros*, T. & S., Faun. Jap. p. 140.

My two specimens of this bird were shot in Hakodadi harbour on May 11th, 1865.

It is by no means a scarce bird, and can be very easily shot; for should it dive on the approach of a boat, it rises to the surface again in a very short time.

Length 13·62 in., wing 7·62 in. Bill orange; eye, legs, and toes yellow-ochre.

91. Phaleris cristatella (Pall.).

My two specimens of this bird were captured on board the schooner 'Kankai,' during a passage from Yokohama to Hakodadi:—one February 25th, 1865, in lat. 32° 15′ N. and long. 143° 10′ E.; the other March 1st, 1865, in lat. 39° 40′ N. long. 142° 40′ E. It was blowing a gale of wind off the land, and several more were observed at the same time.

Length 10 in., wing 5·5 in. Bill reddish-brown; legs and feet lead-colour; iris white.

92. Uria antiqua (Gmel.); T. & S., Faun. Jap. p. 124, pl. 80.

Several specimens were shot in Hakodadi harbour, May 1865. Most of these had lost either the right or left foot, which had apparently been bitten off; and this must have taken place some time before I shot them, as the place was healed and the skin had grown over it.

Length 10·25 in., wing 5·62 in. Bill bluish horn-colour; legs and toes bluish flesh-colour; iris reddish-hazel.

93. Cepphus grylle (Linn.)*.

One specimen only, obtained from a native bird-catcher, March 26th, 1865.

Length 14·25 in., wing 7·5 in. Bill black; inside of mouth bright red; eye dark hazel; legs and feet bright vermilion; claws black.

94. Larus occidentalis, Aud.; Swinhoe, P. Z. S. 1863, p. 326.

Several specimens obtained at Hakodadi in December 1864 and January 1865.

Length 24·12 in., wing 19 in. Bill yellow streaked with red; naked part round the eye pink; legs and feet flesh-colour.

95. Larus melanurus, T. & S., Faun. Jap. p. 132, pl. 88; Blakiston, Ibis, 1862, pp. 311 and 332.

This is the most common Gull to be found at Hakodadi. My specimens were obtained in March and April 1865.

Length 18·5 in., wing 14·75 in. Bill yellow at the base, red at the tip; eye straw-yellow; legs and feet yellowish-green.

96. Larus niveus, Pall.; Bp., Consp. Av. ii. p. 224; Swinhoe, P. Z. S. 1863, p. 325, and 1864, p. 272.

One specimen only, obtained at Hakodadi, Nov. 13th, 1864.

97. Phalacrocorax carbo (Linn.); Swinhoe, P. Z. S. 1863, p. 324; *Carbo cormoranus*, T. & S., Faun. Jap. p. 129.

Two specimens obtained at Hakodadi, December 1st, 1864, near the east point of Hakodadi Head.

Length 31 in., wing 11·12 in. Bill dark brown; eye dark green; legs and feet black.

---

* [Mr. Whitely assures us that there is no mistake in the determination of this species; but the only specimen obtained by him was unfortunately sold to a continental dealer, and we have not been able to examine it. We should have expected it to belong rather to *C. columba* (Cassin).—Ed.]

98. PHALACROCORAX BICRISTATUS, Pall.; *Carbo bicristatus,* T. & S., Faun. Jap. p. 130, pls. 84, 84, B.

An adult male and female and a young bird were obtained at Hakodadi, March 1865.

Bill black; eye dark green; legs and feet black.

XII.—*On the Rufous-tailed Shrikes.*

By Viscount WALDEN, F.Z.S.

(Plates V. & VI.)

I PROPOSE to apply the sectional designation above given to a small group of the genus *Lanius,* which appears to be restricted to a part of Southern Africa, to the continent of Asia, and to some of its islands. The members of this group are characterized by the males being clothed in a more or less rufous-coloured plumage, by the tail being invariably rufous, and by the wings being without any white *speculum* on the primaries. In general terms they may be said to form a group in which the males adopt a style of plumage similar to that which we find on the female of *L. collurio,* Linn., and *L. bucephalus,* T. & Sch. Their relationship, perhaps hereditary, to *L. collurio,* through the female line, if I may so speak, displays itself most prominently in the rufous-brown male of *L. cristatus,* Linn. The descent from this species, through the female line, is again exhibited in the rufous-grey males of *L. arenarius,* Blyth, and *L. lucionensis,* Linn. In *L. superciliosus,* Lath., and *L. phœnicurus,* Pall., ap. Schrenck, we find the darker rufous of *L. collurio* ♀ developed into a bright rufous. On the other hand, in *L. magnirostris,* Less., the influence of *L. collurio* ♂ is to be found prevailing in the ashy head of that species; while in the rufous-coloured *L. isabellinus,* H. & E., the white alar bar proclaims the affinity of the group, by another character, to the Grey Shrikes. Regarding as I do the affinities of colour which link the members of this section together as merely signs of blood relationship, unaccompanied by any very marked peculiarities of structure, I prefer retaining them under the old generic title of *Lanius* to adopting that of *Otomela,* Bp. (Rev. de Zool. 1853), founded by the Prince for this section, without publishing its characters.

The species of the group are in great confusion; and it is in the hope of introducing a little order among them that I venture upon this attempt at a monograph. It will, I fear, be found far from complete; but in the present backward state of our knowledge of Eastern ornithology, more especially of the geographical areas, limits of migration, and the sexual, seasonal, and adolescent phases of the plumage of many Asiatic birds, it is frequently impossible to arrive at final conclusions.

1. LANIUS CRISTATUS, Linn., S. N. 1766, i. p. 134. no. 3. Gm., S. N. 1788, i. p. 298. no. 3. Lath., Ind. Orn. i. p. 72. no. 17. Jerd., Birds Ind. i. p. 406. no. 261 (ex India); Illust. Ind. Orn. part 2 (ex Ind. merid.). Beavan, Ibis, 1865, p. 418. no. 261 (ex Maunbhoom).

Lanius fulvus, cristatus, Edw., Nat. Hist. Bds. ii. p. 125. no. 54 (ex Bengal).

Crested Red or Russet Butcher-bird, Edw., *l. c.* p. 54. pl. 54.

Lanius bengalensis rufus, Briss., Orn. 1760, ii. p. 173. no. 13.

Crested Red Shrike, Lath., Syn. i. p. 170. no. 18.

Woodchat Shrike, var. *A*, in part. Lath., G. H. ii. p. 16. no. 7 (ex Calcutta).

Rufous-tailed Shrike, Lath., *l. c.* p. 17. no. 9 (ex Cawnpore).

Supercilious Shrike, var. *A*, Lath., *l. c.* p. 36. no. 34 (ex India).

Enneoctonus cristatus (Linn.), Bp., Consp. i. p. 362. no. 5 (ex As. cent., Bengal). Horsf. & Moore, Cat. E. I. Mus. i. p. 167. no. 218 (ex Nepaul, Tenasserim). Cab., Mus. Hein. Th. i. p. 72.

Enneoctonus lucionensis (Linn.), G. R. Gray, Gen. Bds. i. p. 291. no. 4, iii. App. p. 42, no. 54. Swinh., Ibis, 1864, vi. p. 420 (ex Ceylon).

Lanius phœnicurus, Pall. ♂ (*hiemalis*?), ♀, Sundev., Bds. of Calc. A. N. H. 1846, xviii. p. 169 (ex Calcutta). Blyth, J. A. S. B. 1846, xv. p. 303 (ex Calcutta).

Lanius melanotis, Cuv. Mus. Paris, *ptm.* Puch., Arch. du Mus. vii. p. 424, Val., Dict. Sc. N. 1826, xl. p. 227 (ex Pondicherry).

Lanius superciliosus, Lath., Blyth, Cat. Mus. Calc. p. 152. no. 874, var. *cristatus* (ex Bengal, Burmah). Jerd., 2nd Suppl. Cat. no. 51 *bis* (ex Ind. merid.). Layard, A. N. H. 2nd series, 1854, xiii. p. 130. no. 143 (ex Ceylon). Tennant, N. H. of Ceylon, p. 266.

Lanius ferrugiceps, Hodgs., Ind. Rev. 1857, p. 446. sp. 3 (ex Nepaul).

Otomela cristata (Linn.), Bp., Rev. de Zool. 1853, p. 437. no. 26 (ex As. cent., Bengal).

Notwithstanding the inappropriate title given by Linnæus on the faith of Edwards's plate and description, there can be no doubt that the common "Brown Shrike" of India is the species for which the designation *L. cristatus* was intended. Buffon (H. N. Ois. i. p. 306) observes that the disposition of the occipital feathers which led Edwards to regard the bird as crested was purely accidental; and he points out that the author of the 'Gleanings' made a similar mistake in his description of *Thamnophilus doliatus* (Linn.). Yet in 1853 we find Prince Bonaparte (*l. c.*) continuing the error by describing the Bengal Shrike as subcrested. Edwards's type was sent from Bengal. Specimens which I have compared from Moulmein, Nipaul, Maunbhoom, Southern India, the Deccan, Ceylon, Malabar, Assam, and Bootan do not exhibit any distinctive characters. Mr. Blyth refers (*l. c.*) to a Ceylon variety as being "very grey, no rufous on the crown, &c." But his specimens may have been of birds in seasonal plumage, or perhaps females. Mr. Layard, in his 'Ornithology of Ceylon' (*l. c.*), regarded it as "a variety, but not sufficiently distinct to constitute a species, being simply paler and wanting the rufous crown of the Indian bird." Mr. Layard identified the Ceylon form with *L. superciliosus,* Lath.; and *L. cristatus,* Linn., of India is decidedly much less rufous than the Malay species. But none of the Ceylon specimens I have examined are to be distinguished from the continental *L. cristatus,* Linn. Yet Dr. Jerdon (*l. c.*) seems likewise to consider that Ceylon possesses a race differing somewhat from the ordinary Indian form. It is, however, very unlikely that a migratory Ceylon form can be distinct from a migratory Indian species and still never be found in India. If the Ceylon race is, in however small a degree, distinct from that of India, examples of it, at two periods of each year, must occur in India.

The Brown Shrike does not seem to extend further south than Tenasserim on the eastern side of continental India, nor does it appear to cross the Sutlej and Indus on the north-western frontier. According to most of the Indian ornithologists it remains in the plains of India during the cold weather only. Its breeding-home has not as yet been made known. The nests and eggs found by Colonel Tickell (J. A. S. B. 1848, xvii. p. 302. no. 31) in the plains of India during the months of June are said by Dr. Jerdon (*l. c.*) to have been those of a Bulbul. Dr. F. Buchanan Hamilton, however, distinctly states, in his MS. notes (H. & M., Cat. E. I. Mus. i. p. 168. no. 218), "this Shrike builds its nests in trees and bushes." Captain Beavan (*l. c.*) informs us that it "migrates (from Central India) to the neighbourhood of Barrackpore during the cold weather." He procured his first specimen there on the 28th September. He adds that it is not common in Maunbhoom, Central India. Mr. Hodgson (*l. c.*) merely says that it is confined to the lower regions of Nipaul, but neither alludes to its nesting nor its migations. That some individuals remain in the plains throughout the year appears from the statement of Mr. Blyth (*l. c.*), that "a few are found near Calcutta at all seasons." Dr. Jerdon tells us that "it disappears from the south of India in the hot season and rains," but omits to state where to. Mr. Layard also is silent on the point. Does it, then, cross the vast ranges of the Himalaya in its northern migration? Or does it not rather find on the southern slopes and in the valleys of those mountains all the conditions suitable for nesting?*

Dimensions.

	Long. Rostr.†	Al.	Caud.	Tars.
♂ ex Bengal	·43	3·87	3·81	·87
♂ „ Moulmein . .	. .	. .	. .	. .
♂ „ Malabar . . .	. .	. .	. .	1
♀ „ ——	. .	. .	. .	·87
♂ „ Ceylon	. .	. .	4	. .
♂ „ ——	. .	. .	3·87	. .

---

* It is extremely doubtful whether any passerine bird which frequents the plains of India during the cooler months crosses to the north of the snowy ranges of the Himalaya after quitting the plains to escape the rainy season or the intense heat of summer. I am not aware that one of the Indian passerine species which have recently been identified with Pallas's types have ever been compared with authentic Siberian specimens.

† The bill is measured from the nostril to the tip, and its dimensions, with those of the other parts, given in English inches and decimals.

This species has been confounded with one or other of the three following birds.

2. LANIUS LUCIONENSIS, Linn., S. N. ed. xii. (1766) i. p. 135. no. 10. Briss., Orn. 1760, ii. p. 169. no. 11, pl. xviii. fig. 1 (ex Lucon). Gm., S. N. ed. xiii. (1788) i. p. 299. no. 10. Lath., Syn. i. p. 172. no. 21; Ind. Orn. i. p. 67. no. 5; G. H. ii. p. 55. no. 57. Swinh., Ibis, 1860, p. 59. no. 70; Ibis, 1861, p. 43. no. 68, p. 255. no. 7, and p. 340. no. 47; Ibis, 1863, p. 272. no. 31. Von Martens, J. f. O. 1866, p. 12. no. 46.

Lanius phœnicurus, Gm., v. Pelzeln, Reise der Novara, Zool. Th. i. p. 84 (ex China, Amoy).

Otomela lucionensis (Linn.), Bp., Rev. de Zool. 1853, p. 437. no. 29.

Brisson described this species from specimens of what seem to have been the female, brought by Poivre from the island of Luzon; and Linnæus adopted his designation. It has since, by some authors, been regarded as a local variety of *L. cristatus*, Linn. Yet, on comparing Indian with Philippine and Chinese examples, they are found to differ in many respects, more especially in the almost entire absence of rufous, in the cinereous colouring of the head, back of neck, and back, and in the much shorter tail, combined with an almost equal wing. It seems to wear the grey livery at all seasons; and no difference of sexual garb has been recorded. It migrates to North China during the spring, and returns south to the Philippines at the close of summer, many in their passage resting in Formosa, and some, according to Mr. Swinhoe's latest observations (*l. c.*), passing the winter in that island. Mr. Swinhoe says that it has a sweet song, and he mentions that it is a common spring and autumn visitant at Amoy. He also observed it passing over at Hong Kong in the spring, and found it at Talien Bay, North China, during the end of June, where it, however, became much scarcer towards the middle of July. Between Takoo and Pekin it was not observed during the months commencing with August and ending with December, which Mr. Swinhoe accounts for by the early period of its southern migration.

On the authority of Mr. Blyth (Mouat, 'Andamans,' 1863, App. Zool. pp. 352, 360. no. 31), I, with some doubt, refer the species which inhabits the Andaman and Nicobar islands to the Philippine bird. But from not being acquainted with specimens from those localities, I am unable to confirm the accuracy of an identification which, if correct, is of considerable interest.

Under the head of *L. phœnicurus*, Pall., it will be seen that there is some reason for believing that Pallas's bird belongs to this species.

Dimensions.

	Long. Rostr.	Al.	Caud.	Tars.
Ex China	·43	3·56	3·50	·87

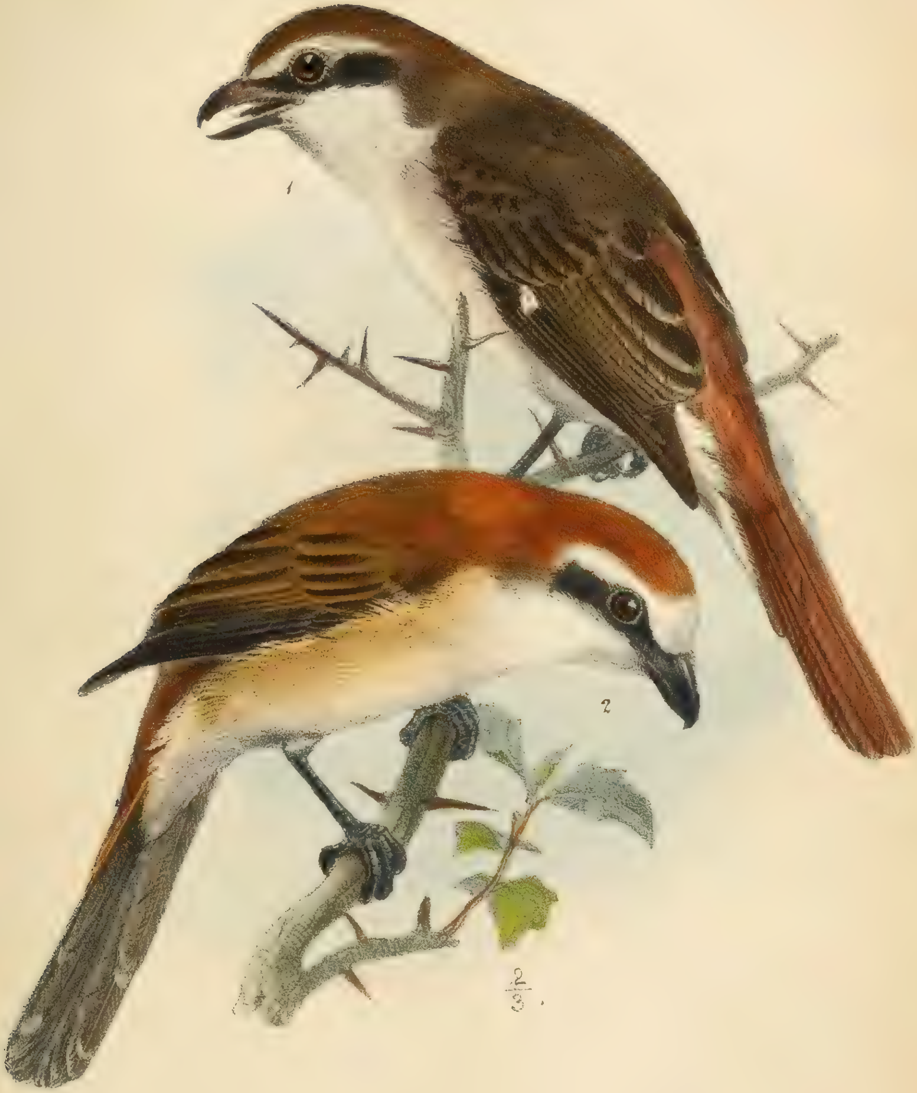
3. Lanius phœnicurus, Pall., It. 1776, iii. p. 693. no. 6 (ex Dauria); Voy. (Paris) 1793, iv. p. 322, App. p. 665. no. 6; Zoogr. Ross.-As. 1831, i. p. 405, no. 59. Lath., Syn. i. p. 116. no. 14; Ind. Orn. i. 71. no. 14. Gm., S. N. ed. xiii. i. p. 309. no. 15. Schrenck, Am. Reise, 1860, i. p. 384. no. 109 (ex Amur, N. China). Middend., Sib. Reise, ii. Th. ii. p. 188. no. 107 (ex Udskoi Ostrog). Radde, Reise, S. v. O. Sib. 1863, ii. p. 277. no. 150. Sundev., Physio. Sälls. Tidsk. 1837–38, p. 64 (A. N. H. 1846, xviii. p. 169) ♂ "perfecte coloratus" (ex Mus. Stockh. patriæ incertæ ?); K. S. Vet. Ak. Handl. 1840, p. 36. Blasius, Naumannia, 1858, p. 310. no. 8 (ex Heligoland); Ibis, 1862, p. 66. no. 8. Gätke, Naumannia, 1858, p. 425 (ex Heligoland).

Enneoctonus phœnicurus (Pall.), G. R. Gray, Gen. Bds. i. p. 291, no. 4. Bp., Consp. i. p. 362. no. 4. Cab., Mus. Hein. i. Th. p. 72. no. 414 (?) (ex Asia).

Otomela phœnicura (Gm. ex Pall.), Bp., Rev. de Zool. 1853, p. 436. sp. 25.

(Plate V. fig. 2.)

Pallas, who only obtained one specimen, and only observed the species on that occasion, procured his type early in the month of June, amongst the rocks of the mountain of Adon-Scholo, near to the river Onon in Dauria. Before he had accurately noted its characters the specimen decayed. We may infer from his account that the following characters given by him (*l. c.*) were drawn up from memory:—The body above rufescent-grey; a black band through the eyes; underneath yellowish-white; a long tail rounded at the end, the whole of



Wolf del & lith

M & N Hanhart imp

Fig 1. LANIUS ISABELLINUS
Fig 2 LANIUS PHŒNICURUS.

which, with the rump, intensely rufous. Schrenck (*l. c.*) has given under Pallas's name an elaborate description of a Rufous-tailed Shrike, many specimens of which, male and female, he obtained at Udskoi-Ostrog, along the course of the Amoor river and in northern China. These differ from the description given by Pallas by having the entire upper plumage of a rust-brown colour, and the forehead and superciliary streak pure white. The upper plumage of both sexes is described as alike, the females being chiefly distinguished from the males by having the white forehead and superciliary streak less strongly marked and less pure, by the occular band being brown instead of black, and by the sides of the neck, the lower throat, the breast, and flanks being finely and darkly lineated, these parts in the male being immaculate. The discrepancy in the two descriptions raises the doubt whether the two authors refer to the same bird. Pallas's description applies with equal truth to *L. lucionensis*, Linn. The long tail and intensely rufous uropygium and tail are not sufficient characters to distinguish it; for, as regards the intensity of colour, specimens of the Philippine species in full breeding-plumage have yet to be procured and described. The rufescent-grey upper plumage is characteristic of *L. lucionensis*, Linn.; and we know that that species travels high into northern China in the early spring to breed. Nor may we presume that Pallas's specimen was in a sexual or seasonal phase of plumage or in that of nonage; for Schrenck has told us that the upper plumage of the sexes does not differ, and he has further described the nestling bird as having the entire upper plumage of a rust-brown colour lineated across with black *. From Hakodadi, killed there in June, I have received a specimen (Pl. V. fig. 2) which, in all respects, agrees with Schrenck's description of his Siberian and North China individuals, and which differs widely from Philippine and China examples of *L. lucionensis*, Linn. For the reasons above given, I entertain great doubts as to the identity of Schrenck's specimens with Pallas's species. Should they prove distinct, Schrenck's bird will require a new title. But before we can arrive at a conclusion, the exact limits of the Philippine bird's northern migration must be discovered, and individuals in full breeding-plumage will have to be obtained. Schrenck's species was obtained on the banks of the Schilka river, and also on the coast of the Sea of Okhotsk. Middendorff procured it only in the latter region, and states that it was the only species of the genus obtained by him. The bird he identified as *L. excubitor*, Linn., but of which he failed in getting a specimen, was probably *L. bucephalus*, T. & Sch. Radde, who, as well as Middendorff, gives no description of his specimens, found *L. phœnicurus*, Pall., not uncommon among the morasses along the banks and at the mouths of the larger rivers which fall into Lake Baikal. But the winter home of Schrenck's species has yet to be discovered. Mr. Swinhoe did not observe the bird in any of the parts of China visited by him. It would be of some assistance if a description of the specimen killed in Heligoland were to be published.

---

* It is to be regretted that, in his admirable article on *L. phœnicurus*, Schrenck has not commented on the discrepancies between his specimens and Pallas's description.

The specific distinction between *L. phœnicurus*, Pall., and *L. collurio*, Linn. (on the hypothesis that he possessed specimens of Pallas's species), has been most conclusively demonstrated by Schrenck (*l. c.*). The specimen described by Sundevall (*l. c.*), preserved in the Stockholm Museum, must belong either to Schrenck's species, or to Malay *L. superciliosus*, Lath.

Dimensions.

	Long. Rostr.	Al.	Caud.	Tars.
Ex Hakodadi	·43	3·62	3·87	·87

4. Lanius superciliosus, Lath., Ind. Orn. Supp. 1801, p. 20. no. 14; Gen. Hist. ii. p. 36. no. 34. Raffles, Mem., Cat. Zool. Sp. p. 658 (ex Sumatra). Sundev., K. S. Vet. Ak. Handl. 1857, pp. 31, 60. no. 66, 2. Blyth, Cat. Mus. Calc. p. 152. no. 874 (ex Malacca) (nec Licht., Doubl. 1823, p. 47. no. 509 = *L. rutilans*, Temm., Man. iii. p. 601) (nec Swains., N. H. Bds. ii. 219 = *C. erythronotus*, Vig., P. Z. S. 1831, p. 42). v. Pelzeln, Nov. Reise, Zool. Th. i. p. 84 (ex Malacca, at sea, near the Mariannes, lat. 17° 32′ N., and long. 138° 8′ E.).

Le Rousseau, Levaill., Ois. d'Afrique, ii. p. 60, pl. 66. fig. 2 (ex Java).

White-cheeked Shrike, Lath., (?) Gen. Hist. ii. p. 53. no. 53 (ex India).

Enneoctonus superciliosus (Lath.), G. R. Gray, Gen. Bds. i. p. 291. no. 6. Bp., Consp. i. p. 363. no. 8 (ex Java?). H. & M., Cat. i. App. 1. p. 394. no. 638 (ex Malacca, Pinang).

Otomela superciliosa (Lath.), Bp., Rev. de Zool. 1853, p. 437. no. 29 (ex Java?).

Two questions must be answered before the correct synonymy of this species can be determined. Does it occur in Java? Is it the same, or does it differ from *L. phœnicurus,* Pall. ap. Schrenck? Levaillant (*l. c.*) first described and figured the bird, said by him to have come from Java, on which Latham founded his species. Levaillant's authority for its *habitat* is, of course, untrustworthy; and no subsequent author who adopts it supports Levaillant by collateral evidence. The species is not included by Horsfield in his "Catalogue of the Birds of Java" (Linn. Tr. xiii.). No specimens from that island are contained in the British or East-India Museums. Mr. Blyth, intimately acquainted with Eastern ornithology, informs me that he never met with a Javan specimen; and Mr. Wallace did not observe it in Java. *L. bentet,* Horsf., is the only Javan Shrike known to these eminent naturalists; and no other Javan species is within my own limited knowledge. Yet if such a bird does inhabit Java, it will have to be regarded as *L. superciliosus,* Lath., *verus.* In the Malay Peninsula a species, very common in collections, exists, answering in all respects to Levaillant's account of *Le Rousseau*; and for the present it will be convenient to regard it as having supplied Levaillant with the subject of his plate and description. Its occurrence in Sumatra, not in itself improbable, rests upon the sole authority of Sir S. Raffles.

On the supposition that my Hakodadi specimen is *L. phœnicurus,* Pall. ap. Schrenck, it is not easy to discriminate the characters which separate it from Malay *L. superciliosus.* A somewhat shorter wing, a brown, more dully coloured back, and a narrower white frontal band constitute the only perceptible discrepancies of the Malay specimens I have had opportunities of examining. Otherwise the two are exactly similar, the rufous of the head and upper tail-coverts being quite as intense, and the white of the under surface as pure and as extended. On the other hand, the female or young of the Malay species is almost pure cinereous on the upper surface. Bonaparte (*l. c.*) uses the expression "*rufo-cinerea;*" but I have seen Malay specimens which are cinereous without a tinge of rufous. In the next place, all our information leads to the conclusion that the Malay bird does not migrate to the north. Further investigation will be necessary to enable us to decide whether it be the same as the Japan bird.

Herr v. Pelzeln (*l. c.*) mentions that a specimen of this species was obtained by the 'Novara' expedition; it flew on board the frigate while off the Marianne Islands. Is it the same as the Malayan bird?

Lanius collurioides, Less. (Bél. Voy. 1834, p. 250), ex Pegu, hitherto regarded by Mr. Blyth and other writers as a synonym of either this species or of *L. cristatus*, Linn., is, as was suspected by Prince Bonaparte (Rev. Zool. 1853), equal to *L. hypoleucus*, Blyth (J. A. S. B. 1848, p. 249), ex Pegu. It is a well-marked distinct race of *L. vittatus*, Val. (Dict. Sc. Nat. 1826, xl. p. 227), described from specimens obtained at Pondicherry, and brought to France by Leschenault; for Valenciennes's description, as already shown by Prince Bonaparte (*l. c.*) distinctly applies to the common Bay-backed Shrike of India, very abundant on the Coromandel coast. Mr. Vigors's designation of *Collurio hardwickii* (P. Z. S. 1831, p. 42) must therefore be cancelled.

Dimensions.

	Long. Rostr.	Al.	Caud.	Tars.
Ex Malacca	·43	3·50	3·87	·87

5. Lanius magnirostris, Less., Bél. Voy. 1834, p. 251 (ex Les Indes); Compl. de Buff. ii. p. 415.

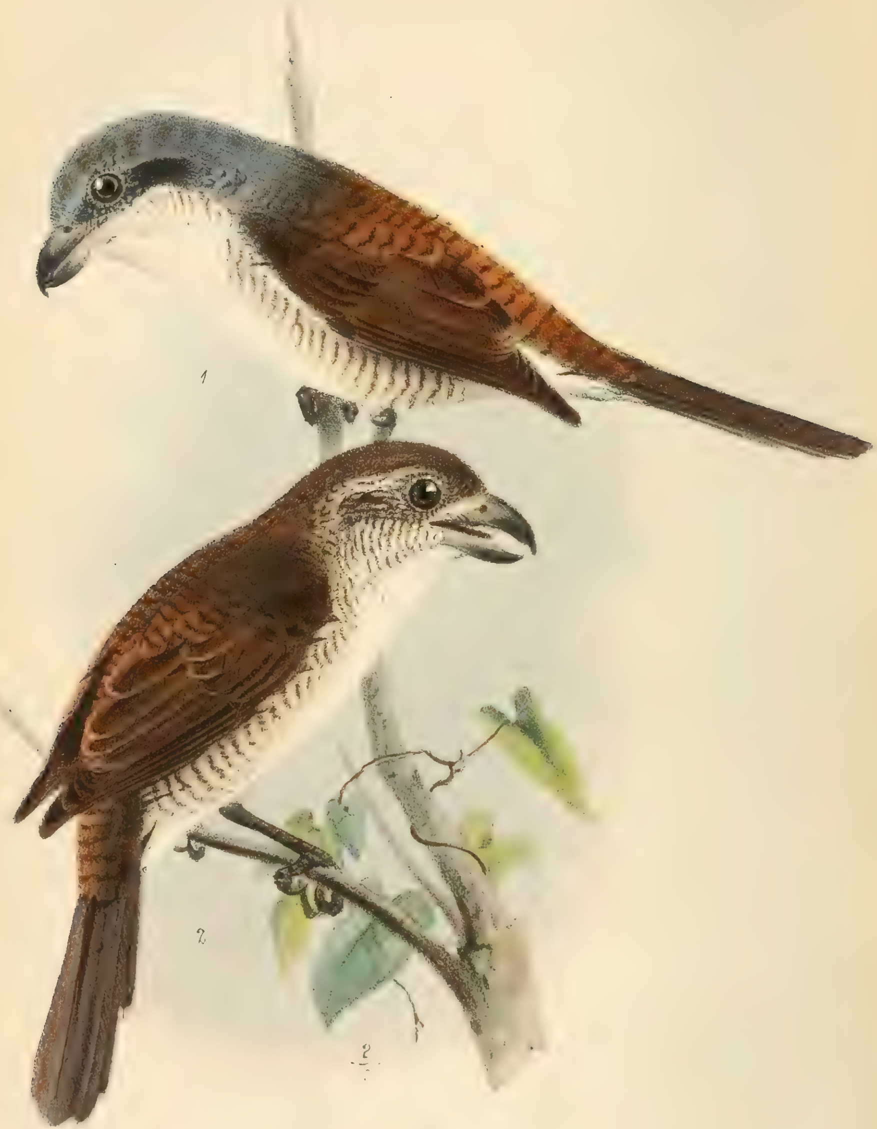
Lanius strigatus, Eyton, P. Z. S. 1839, p. 103 (ex Malay Penin.).

Lanius ferox, Drap., Dict. Sc. N. 1842, viii. p. 366 (ex Java?).

Enneoctonus crassirostris, Kuhl, Bp., Consp. 1850, i. p. 362. sp. 6 (ex Java?). (v. Hasselt), Cab., Mus. Hein. 1850–51, Th. i. p. 72, no. 415, sp. 4, ex Java (?).

Lanius crassirostris, Kuhl, v. Pelzeln, Nov. Reise, Zool. Th. p. 84 (ex Malacca).

Ibis 1867 Pl. VI.



J W [illegible]

M & N Hanhart imp

LANIUS MAGNIROSTRIS

Otomela crassirostris (Kuhl), Bp., Rev. de Zool. 1853, p. 437, sp. 31 (ex Java?).

Lanius tigrinus, Drap., Blyth, Cat. Mus. Calc. p. 152. no. 875, (Malacca) (nec Drap.).

(Plate VI. fig. 1, ♂, fig. 2, ♀.)

A very small species of Shrike, perhaps the smallest of the genus, with a stout, almost disproportionate bill, and with the upper plumage generally deep rufous-brown, verging on chocolate, much striated with fine dark lines, the crown of the head, in old males, cinereous, seems to be common in the Malay Peninsula and exists in Sumatra. It and assumed Javan individuals have been described as distinct by several authors and under separate names; and in their turns these titles have been regarded by subsequent writers as synonyms of one another, as well as of others of the older species already noticed. It is a well-marked form, readily to be distinguished by its diminutive size, grey head in the male, and very thick bill; yet materials necessary for a permanent rectification of its synonymy are still wanting, and will remain incomplete until specimens of the form described as existing in Java are brought together and compared with those of Malacca and Sumatra. One, if not two, species, apparently nearly allied to the Malay form, have by different authors been described as inhabiting Java. And yet I can find no satisfactory evidence that a Shrike of that race actually inhabits the island at all. No Javan examples are preserved in the British or East-Indian Museums. Nor did Mr. Wallace meet with any such species in Java, although he procured several specimens in Sumatra. The localities given by Drapiez generally require collateral support; and the same may be said of those contained in the 'Museum Heineanum:' while in the 'Conspectus,' on the subject of localities, Bonaparte is singularly inaccurate. If a thick-billed rufous Shrike does occur in Java, it will still remain to be shown whether it be the same as, or specifically distinct from the Malay bird. In the absence of Javan examples, and of any reliable evidence of their occurrence, I have brought all those titles which refer to alleged Javan specimens of the thick-billed form under Lesson's designation of *L. magnirostris*, which clearly refers to the Malay race, and has the right of priority. He has given a detailed description of the male and the female. If it be eventually shown that Java is inhabited by an allied form yet specifically distinct from the Malay type, it will have to take the title of *L. ferox,* Drap., and not that of *L. tigrinus* of the same author. *L. ferox,* Drap., is described (*l. c.*) as measuring seven inches in length, whereas *L. tigrinus,* Drap., usually regarded as a synonym of *L. magnirostris,* Less., is said by its author to measure ten inches and a half. Letting alone the fact that in the same article on the Shrikes Drapiez described these two birds as distinct species, the large dimensions of his *L. tigrinus* are sufficient to stamp the species as distinct from *L. ferox.* At the same time I am unable, from the description, to identify *L. tigrinus*; it is possibly a young *L. cristatus,* Linn., from the continent. Bonaparte (*l. c.*) makes *tigrinus* the male, and *ferox* the female. But the sexes in the Malay bird are of equal dimensions, and no true *Lanius* is known in which there is a difference of three and a half inches between the sexes. The description of *L. ferox,* taken along with its small size, clearly refers to the female or young male of the Malay bird, or, if it does there occur, to its Java representative.

Lanius crassirostris, Kuhl, is introduced, without description, in the 'Conspectus' as a distinct species from Java. Three years later the Prince fully described the male and female in his 'Monographie des Laniens;' and the specific characters there given apply in every respect to the Malay bird. Moreover, although permitting Kuhl's manuscript title to be retained, the Prince identified his species with *L. magnirostris,* Less., *L. ferox* and *L. tigrinus,* Drap., *L. strigatus,* Eyton, and *L. crassirostris,* v. Hasselt, all titles possessing priority over the designation adopted by the Prince*. The *L. crassirostris* (v. Hasselt) of

---

* The carelessness of this great ornithologist is curiously illustrated in his Monograph by the notes of exclamation he inserts after quoting Dr. Cabanis. In the 'Museum Heineanum' that author included the rufous-tailed Shrikes in Boie's genus *Enneoctonus.* This excites the Prince's astonishment, and he gives expression to his amazement by his usual notes of exclamation. Yet in the 'Conspectus,' published at about the same time, it will be seen that the Prince himself included all the rufous Shrikes under *Enneoctonus.*

Dr. Cabanis, by the description given in the footnote (*l. c.*), is evidently either the Malay species or else the possible but improbable Javan form.

Dimensions.

	Alt. Rostr.	Long. Rostr.	Al.	Caud.	Tars.
Ex Malacca . . .	·37	·50	3·25	3	·75
Ex Malacca . . .	·31	·50	3·25	3·12	·75
Ex Sumatra . . .	·37	·43	3·25	3·25	·81

6. LANIUS SCHWANERI, Bp., Consp. 1850, i. p. 363. sp. 7 (ex Borneo). V. Pelzeln, Nov. Reise, Zool. Th. i. p. 48 (ex Banjermassing).

Otomela schwaneri, Bp., Rev. de Zool. 1853, p. 437. sp. 30.

Described from specimens in the Leyden Museum as resembling *L. superciliosus*, Lath., but as being scarcely so rufous, and as wanting the white superciliary streak. I am unacquainted with the species. A specimen of a female was obtained by the 'Novara' expedition, which Von Pelzeln has identified with the above species, but which possessed a narrow superciliary streak. In badly prepared skins the superciliary stripe is often to be found obliterated; and this was probably the case in the Prince's type specimen.

7. LANIUS ARENARIUS, Blyth, J. A. S. B. 1846, xv. p. 304. Jerd., Bds. Ind. i. p. 407. no. 262. Strickl., P. Z. S. 1850, p. 207. no. 46.

Lanius superciliosus, Lath., Scinde variety, Blyth, Cat. Calc. Mus. p. 152, no. 874.

Otomela arenaria (Blyth), Bp., Rev. Zool. 1853, p. 437. no. 27.

Enneoctonus arenarius, Blyth, H. & M., Cat. i. App. i. p.394. no. 639 (ex Afghanistan).

This species was described by its author from specimens obtained by Captain Boys "in the country lying between Scinde and Ferozepore." I am only acquainted with specimens procured in various parts of South-western Afghanistan, and which agree perfectly with Mr. Blyth's description. If they prove identical, of which there can be little doubt, I am unable to account for Mr. Blyth's original remark, that "it can scarcely be admitted as a separate species" (*l. c.*); for, apart from its totally distinct colouring, its caudal structure is alone sufficient to separate it from *L. cristatus*, Linn. Though a smaller bird, its rectrices are much broader than in the Bengal bird, and the tail is less graduated.

In the specimen before me the centre pair of rectrices, at about one-third of their length from the end, display a well-marked irregular light-coloured transverse band—a good distinctive character if found to be constant in all examples. Dr. Jerdon cannot have seen specimens of this form, or he would not have included it among his list (*l. c.* iii. App. p. 875) of the "somewhat doubtful" species.

Dimensions.

	Long. Rostr.	Al.	Caud.	Tars.
Ex Bagh, S.W. Afghanistan . . .	·40	3·75	3·62	·93

8. Lanius anderssoni (Strickl.).

Enneoctonus anderssoni, Strickl., Contrib. to Orn. 1852, p. 145. no. 18 (ex Damaraland); Mem. ii. p. 336. no. 18. Bp., Rev. de Zool. 1853, v. p. 437, note.

Founded on a specimen obtained by Mr. Andersson in the Damara country of Southern Africa. Strickland mentions that it is allied to *L. melanotis*, Val. (*L. cristatus* of this paper), but that it "differs in the ferruginous ear-covers, longer wing, shorter tail, &c." A peculiar character seems also to be the absence of a black or brown ocular band. A white alar bar is not mentioned; and as so important a character is not likely to have escaped the notice of so accurate an observer as the describer, I include this species in this section. Yet it may eventually prove to have been the female or young of a form belonging to another group of the genus.

This completes the number of Rufous-tailed Shrikes without an alar speculum known to me.

Lanius isabellinus, H.&E. (Symb. Phys. i. fol. *e*, note), obtained in Arabia*, is an interesting transitional link, being a Rufous-tailed Shrike but possessing a white alar bar. A species combining these two characters was obtained at Hyderabad, in

---

* The late Mr. Strickland (P. Z. S. 1850, p. 217. no. 46) records this species from Kordofan.

Scinde, by the late Dr. Gould, of which a specimen, in bad order, is now preserved in the East-India Museum (Plate V. fig. 1). Not being acquainted with typical Arabian examples, I cannot pronounce decidedly on the identity of this Scinde specimen and Ehrenberg's species. It will be seen, by the following description, that it differs from Ehrenberg's account of *L. isabellinus* by possessing a rufous head and rufous-brown dorsal plumage. But I suspect that Ehrenberg's type was either a female, a young bird, or else a male in seasonal plumage; for the British Museum contains a specimen from Bagdad which is palpably of the same species as this Scinde specimen, but which answers perfectly to Ehrenberg's description of *L. isabellinus*; that is, the upper plumage is pale fulvo-cinereous. We have no means at present of deciding what state of the bird this cinereous phase denotes; but I incline to the opinion that it belongs to the female sex. As this Hyderabad specimen constitutes an additional species to the fauna of the Indian region comprehended within the geographical limits of Dr. Jerdon's work, I append a detailed description:—

Entire upper surface of head and uropygium rufous-brown, as in brightly plumaged specimens of *L. cristatus*, Linn. Intermediate dorsal region, scapulars, and all the wing-feathers brown, obscurely tinged with rufous, the secondaries, wing-coverts, and scapularies being broadly edged with ruddy fulvous. Upper tail-coverts and the rectrices bright pure rufous, as in *Ruticilla phœnicura*, Linn.; the under surface of the rectrices somewhat paler, but pure and uniform in tint. Under wing-coverts and entire under surface, so far as the state of the specimen permits description, pale creamy or yellowish-white. Under tail-coverts, which are lengthened, nearly pure white. Flank-feathers tinged with a very pale shade of pure rufous. A narrow fulvous line at the base of the maxilla passing back, over, and behind the eye. A broad black band, passing through the eye, includes the lores and the ear-coverts. A white alar bar is formed by a white band commencing on the outer web of the 3rd primary and passing through both webs of each succeeding quill to the 9th, in which and the 10th the white forms only a spot on the outer web. Under surface of quills pale brown, their inner webs being margined with light fulvous. 1st primary very short, the 2nd equal to the 5th, and a little shorter than the 3rd and 4th, which are coequal and longest; the 5th but a trifle shorter than the 3rd and 4th, and longer than the 2nd. The tail is moderate, graduated; the wings are lengthened; the bill moderate; the under tail-coverts extend to fully half the length of the tail; the tarsus and feet are powerful. Arabian specimens will have to be compared; but I have little doubt that this Scinde individual will prove to be a mature male of *L. isabellinus*, H. & E.

Dimensions.

	Long.	Rostr.	Al.	Caud.	Tars.
Ex Scinde. . . .		·43	3·87	3·62	·87

In a note (Rev. de Zool. 1853, p. 437), while failing to identify it, and without mentioning its origin, Bonaparte has described a rufous-tailed Shrike under the title of *Lanius jeracopis*, de Filippi. I have been unable to trace the species, but the characters given are those we find in young males of *L. superciliosus*, Lath., ex Malacca.

The following table represents the geographical limits of each species of the group as far as is at present known:—

1. *Lanius cristatus*, Linn. Plains of India, Ceylon, Nipaul, Assam, Bootan, Arakan, Tenasserim.
2. *L. lucionensis*, Linn. Luzon, Formosa, China, Andamans, Nicobars.
3. *L. phœnicurus*, Pall. ap. Schrenck. Amur, North China, North-east Siberia, Japan.
4. *L. superciliosus*, Lath. Malay Peninsula, Sumatra.
5. *L. magnirostris*, Less. Malay Peninsula, Sumatra.
6. *L. schwaneri*, Bp. Borneo.
7. *L. arenarius*, Blyth. Punjab, Upper Scinde, South-west Afghanistan.
8. *L. anderssoni* (Strickl.). Damaraland.

XIII.—*Jottings on Birds from my Amoy Journal.* By Robert Swinhoe, Her Majesty's Consul, F.Z.S. &c.

1866, May 3rd.—I procured from a fisherman an unusually white Albatros (*Diomedea brachyura*), which on dissection proved to be a female. It nevertheless had the swollen and convoluted trachea which I before thought was peculiar to the male. The specimen was an old bird.

May 8th.—A bird was brought to me from the country near, identical in most respects with *Coccystes coromandus* (L.) of India, but differing in having the belly and flanks, together with the tibial feathers, of a light dusky-brown washed with yellowish. Length 15 inches; wing 6·6 in.; tail 9·6 in. The outermost tail-feather on either side is tipped with whitish, chiefly on the outer web; the rest have less white as they approach the middle. In other characters the bird is precisely as described in Dr. Jerdon's 'Birds of India' (i. p. 341). My specimen appears to be mature, and I will separate it from the Indian species simply as var. *fuliginiventer* until I have an opportunity of comparing the two forms. I have not before noticed any of the *Coccystes* group of Cuckoos in China.

May 18th.—There are some thirty or forty nests of *Cypselus subfurcatus*, Blyth, under the verandah of a house in Amoy; but they all appear to have separate entrances, each nest one for itself. I sent a man to examine them, and he brought down two dozen eggs. They were all hard-set, did not differ much in size, and presented nothing peculiar.

While out walking in the evening I observed a Black Jackdaw (*Corvus neglectus*, Schleg.) hopping about among the rocks. It was rather tame, and may have escaped from some ship lately down from the north.

May 26th.—Some young unfledged Larks (*Alauda cœlivox*, Swinh.) brought for me to look at. The Chinese tell the males by three black spots on the yellow tongue of the nestling, one at the tip and the other two on each side of the centre. Those without spots, or with only the two central ones, they reject as females.

June 13th.—I came across a Chinaman carrying a freshly shot *Tantalus*, a form of bird never met with by me before in China. This example is in its first year's plumage, and therefore not easily identified; but it appears to me to unite some of the characters of the Indian *T. leucocephalus* with those of the Malay *T. lacteus,* Temm., being about the size of the former, but with the less nude face of the latter. It is remarkable for its long legs, the tarse being 1·5 inch longer than that of *T. leucocephalus* in Dr. Jerdon's description. I will name it temporarily

TANTALUS LONGIMEMBRIS, sp. nov.

Length 42 inches; wing 20. Tail of twelve feathers, but slightly graduated, the four middle ones being rounder at their tips, the laterals square-shaped; rather more than 7·5 inches long. Under tail-coverts very fluffy, and extending to 1·5 inch short of the tip of the tail. Bare portion of tibia 8 inches, tarse 9·6, middle toe 5·3, outer toe 4·9, inner toe 3·75, hind toe 2·4—all including claws, the toe-pad extending nearly to the tip of the claw. Bill 10·2 inches along the culmen, and the same from gape to tip of the lower mandible; greatest depth of bill 2·2. Bare skin of forehead 1 inch, descending backwards behind the corner of the eye ·5 inch, advancing again on the lower mandible to about ·75 inch from its base, and running back on the throat into an angle on a plane with its limit behind the eye. Tongue about ·8 inch long by ·2 broad throughout, flat, horny, and rounded off at the tip. Bare skin orange; bill light orange-yellow, tinged, especially towards the tip, with bluish-grey. Inside of the mouth tinted much as the exterior of the bill. A blackish mark runs round the base of the bill. Irides bright yellowish-brown. Head and neck clothed with small feathers, like the same parts on our Pelican, of a light milky-brown with a good many white feathers interspersed. Lower back, rump, belly, and under tail-coverts pure white. Rest of the body light milky-brown, with scattered white feathers. Lesser wing-coverts light brownish-grey, with paler edges and on many feathers a darker shade in the middle and at the base. It is difficult to infer what these feathers may be in the adult. In *T. leucocephalus* they are black, in *T. lacteus* white. Greater coverts blackish hair-brown on the concealed half of the feathers, and milky on the exposed part. These coverts blend with the tertials, which are decomposed and tinted with a fine rose-coloured glow. Rectrices and remiges of a fine bronzed black. Underwing and axillaries deep hair-brown, the feathers with paler (and some with whitish) edges; the brown extends to the sides of the breast. Tibiæ nearly colourless, slightly tinged with blue and pink, and just tinted with yellow. Tarsi shaded with black along the posterior edge, and tinted with pink down the front; feet dingy, claws black; reticulated edges of scutella white.

The specimen on dissection proved to be a male. The œsophagus, ·7 inch wide, contracts gradually to ·4, and continues at that width downwards for 3 inches, then expands into a sac ·6 wide and 1·5 long; it again contracts, and so continues for 1·5, expanding into the proventricular sac, which is 1·1 wide and 1·5 long: the proventriculus contracts as it reaches the stomach. The stomach is a strong muscular spheroid, flattened at the sides, and about 2·5 in greatest diameter; its walls are thick, and it is coated internally with a thick epithelium, stuffed with remains of crabs and other small crustaceans. Trachea downwards from 1·5 inch above the bronchi composed of very narrow closely set rings keeled down the front, and expanding above the bronchia into a flattened transverse oval. From this last the bronchia are given out, their rings being about double the width of the lower tracheal rings. No keel runs down the back of the trachea, but just above its expansion it gives out a peaked projection. Rings in the upper portion of the trachea from ·12 to ·1 in. thick. Membrane between the oval expansion of trachea and bronchia narrow and not very perceptible. No muscles are planted on the oval expansion, but a pair are given off from the trachea about 8 in. above the insertion of the bronchia. Sternum with one deep posterior emargination on either side, the lateral processes projecting beyond the posterior point of the keel; furcula fitting closely into the anterior crest of the keel, but not anchylosed to it.

A few days after the acquisition of this specimen I saw a small party of large long-legged birds soaring in circles like Herons over this island: I believed them to be of this species. From its late occurrence here, it is not improbable that this *Tantalus* breeds somewhere in our neighbourhood. It is curious that I have never met with it before. I believe it to be a new species of this singular group, and I look with anxiety to procuring an adult specimen.

June 18th.—At Amoy the *Larinæ* are only winter visitants; but some of the *Sterninæ* pass the summer in the neighbourhood, as I have before stated. *Sterna caspia* and *Sternula sinensis* I have only found here in winter; but *Sterna velox* I noted breeding at Kelung, in Formosa, and *Sternula sinensis* on the east coast of that island. One often sees the former of these last two in Amoy Bay in summer. But there is still another Tern, at which I have caught repeated glances, both in pairs and in small parties during the hot weather, and, not having procured specimens, I vaguely set it down as *Sterna hirundo* (Ibis, 1866, p. 135). This day I was much pleased by my hunter bringing in, along with some specimens of *S. velox*, several of the unidentified Tern. He told me that he shot them among some small rocks off Quemoy (a large island seaward of Amoy), where they were breeding. Their eggs the hunter had unfortunately converted into "*Chowchow.*" It is just in the neighbourhood indicated that I had before watched parties of this small Tern on the sea-washed rocks while passing in a steamer. The examples agree very nearly with *Sterna melanauchen*, Temm., and, indeed, from the wide range of that species, must belong to it. From Dr. Jerdon's description (B. Ind. iii. p. 844), however, it differs in its much longer forked tail, in the fine rosy hue of its whole under-plumage (which that author does not mention at all), in its wholly black bill, and in the madder-red subtint of its legs. I strongly suspect that the bird Dr. Jerdon drew up his description from was a specimen shot in winter, which might account for the short length he allows the tail, and one long exposed in a cabinet open to the light, which would further account for the lack of the blush and the changed hue of legs and bill. Even shut up in closed drawers I find that my skins have lost many of their roses, and that the tips of their bills have become yellow horn-colour. A few words therefore on the appearance of specimens skinned, but not yet stiff, will instruct many of my readers.

Sterna melanauchen, Temm. Length 13 inches; wing 8·5. Tail 7, fork 3·8. Bill along culmen 1·4. Tarse about ·75.

Bill entirely black; inside of mouth deep tile-red. Loral region, stripe past the eye, and broad nuchal band black; outer web of outermost primary quill to about ·5 inch of its tip grey-black. Legs blackish-brown, with a blood-red transparency about them. Upper parts pale grey, nearly white on the tail and quills, which have white stems and a semitransparent appearance. The new quills of the wings and tail, not full-grown, have a rosy glow even on their stems. Carpal edge of the wing and broad inner margins of quills white, as are also the extremities of the tertials. Forehead, vent, and under tail-coverts pure white, with but a slight blush; the rest of the under parts white, with a lovely glow of rosy. Middle claw with a slight attempt at serration on its falcated edge.

A male *Anas glocitans* died in the aviary of a friend. Its iris was chestnut-brown. Bill deep liver-brown. Legs and toes pale bluish-grey, tinged with brown at the joints, and with deeper brown on the webs and nails.

July 2nd.—My hunter brought me a pair of *Ardetta sinensis,* together with their nest containing five eggs. The nest is loosely put together, and about 10 inches in entire diameter. It is composed of reeds and rushes. The five eggs all differ somewhat in length and breadth, some being more spherical, some more ovate; mean length 1·2 inch; mean greatest breadth 1·1 inch. They are all but white, having just a faint tinge of asparagus-green. All the eggs contained young, but they were of different ages. The most advanced, the bill of which looked as if the tips of the mandibles had been clipped off, was nearly fit to break forth. Its down was of a light fawn-colour. The different stages of these chicks show, I presume, that the hen begins to sit on the first egg. I observed the same habit in *Nycticorax griseus* (Ibis, 1861, p. 54).

Ardetta sinensis, adult. Bill pale sienna-yellow, washed with vandyke-brown; blackish-brown along the culmen. Cere and orbits yellow. Iris bright yellow. Legs, claws, and toes pale sienna-yellow, tinged with green and washed with vandyke; the greenish-yellow bright at the tarsal joint and sulphurous underneath the tarsus near the same joint.

August 1st.—A thunder-cloud obscuring the sun at 6 P.M., I saw three birds sailing or floating high in the air with pointed wings and with legs protruded behind. From their size and appearance I took them to be *Tantali*.

The examples of *Euplocamus swinhoii* in my aviary skulk all day in the holes of the rockery, and only come out to feed at night: they roost on the high perches. *Phasianus torquatus* does not resort to the holes, even when it is frightened.

August 25th.—The little Button-Quail from Formosa that I had in my aviary was killed this morning by a blow on the back of the head, inflicted by a "Hwamei." As it was a female in full summer plumage, I will give a description of it.

Turnix rostrata, nobis (Ibis, 1865, p. 543), ♀. Bill light indigo with blackish culmen; rictus and inside of mouth pale indigo. Tongue longo-sagittate, void of papillæ. Iris pearly, with a slight tinge of yellow. Legs light indigo, deeper on the joints and toes, with a greenish wart on the tarse. Skin of the face deep bluish-grey. Feathers of the head black, broadly tipped with white. Chin and throat of a deep black, which extends down to the breast. Lower breast, flanks, upper thighs and rump fine deep chestnut. In other respects, as to colouring, this specimen is similar to the females before described [Ibis, 1866, pp. 403, 404]. Tail composed of eight soft feathers. Total length of fresh bird 6 inches.

Dissection showed a cluster of small ova. Cæca about 1·5 inch from anus, about 1·25 in. long, black, and bulging at their ends into flask-shaped sacs. Stomach nearly 1 inch long, heart-shaped, and somewhat carinated round the narrow sides, with very strong lateral tendons.

The newly fledged young of *Ixus chrysorrhoides* are more dusky than the adult, with less decided markings on the plumage. The crown and throat are tinged with blackish-brown, chiefly near the bill. The vent is the same colour as the belly, and not tinted with crimson. I have one adult specimen of this species from this neighbourhood with the vent a dingy *yellow*. Mark this!

A *Melanocorypha mongolica* that I have in a cage has a great deal of white about it, and is becoming whiter and whiter. Several of the *Euplocami* of both sexes in my aviary are getting spotted with white, mostly about the wings. I suppose it must be a sign of debility, for want of proper nourishment.

In relation to *Gallinaceæ* I should like to make an observation or two about the "Rooster." There is a breed here, with a white hair-like plumage and blue-and-white face-wattles, called by Chinese the "Silken Fowl." I dare say it is also known in England. This bird has the skin tinted with black, and black tissue enwrapping its bones, which gives the roast or boiled a decidedly ugly appearance on the table; but its flesh is, nevertheless, white and sweet. This variety, breeding with the ordinary Dunghill race, gives, so far as my observation goes, an offspring, though often externally similar to the latter, yet always with a predominance of black pigment, as in the former. What the colouring-matter is, and how caused, I have not been able to ascertain. Another curious breed of the "Domestic Bird," as the Chinese in figurative language style the *Phasianus gallus* of Linnæus, is the kind called here the "Pine-apple Hen," so named from the strange reversal of all its feathers, even to the quills and tail, towards the head like the leaves of the Pine-Apple. This race, breeding with any other, produces reverted feathers in the offspring. Crossing with the "Silken-Fowl," if a "Silken" brood is produced, as usually happens when the male is the "Pine-apple," the quill-feathers *only* are reversed. These facts, however, may already be known to poultry-fanciers. Our third peculiar breed at Amoy is the large Cochin or Shanghai Fowl, which has had its turn of popularity in England.

Sept. 4th.—Our Solitary Sparrow (*Petrocincla manillensis*) is now about our housetops, and cheers us with his sweet song, glad, it would seem, at being relieved from his arduous nidificatory duties among the solitary hills.

A young *Melophus lathami* that I have in keeping, besides the usual hop common to *Emberizæ*, occasionally indulges in a shuffling walk.

Sept. 13th.—The first Curlews seen this year.

Sept. 30th.—The first Snipe of the season. Two specimens of *Gallinago solitaria* and one of *G. scolopacina* brought to me by a Chinaman. We do not generally look for the latter till the middle of October; but the north-east monsoon has begun early this year. *G. stenura* is usually here a little in advance of *G. scolopacina*. By the way, I see some notes on the arrival of Snipes near Calcutta, by Capt. R. C. Beavan (P. Z. S. 1865, p. 690). His field-log is very valuable to those interested in the migrations of Indian Birds; and long may he continue to favour us with such scraps! I might assist him with a hint how to discriminate the species of Snipe even "in a plucked state." The tail, of course, is the first distinguishing character between *G. stenura* and *G. scolopacina*; the second is the underwing, the patches of white on the axillaries of the latter being wanting in the former, which has those parts continuously waved over with dark lines; but the character useful for telling the bird in a nude state is the shape of the bill. Look down on the surface of the bill: in *G. stenura* it keeps on contracting towards its tip, in *G. scolopacina* it expands into a narrow *spatula* at the nervous portion. This last is a sure and constant character, and one that I have never found to fail.

Oct. 23rd.—In my list of the Birds of China (P. Z. S. 1863, p. 317), &c., I introduced (no. 310) "*Eurhinorhynchus pygmæus*" as a Chinese species on the faith of *Limicola pygmæa* of Middendorff. This last, Mr. A. Newton pointed out to me, referred to no. 301 (*Tringa platyrhyncha*, Temm.); and I therefore cancelled the insertion (P. Z. S. 1864, p. 272). But now a specimen of *Eurhinorhynchus* has actually occurred here. It was brought to me by my sea-coast hunter this morning. But if Mitchell, in Mr. Gray's 'Genera,' figures the bill correctly, it cannot be the true *E. pygmæus*; and if Dr. Jerdon (B. Ind. iii. p. 692) describes accurately the form found on the coast of India, which he considers identical with the European species, neither can it be that species. I see, however, that Blyth procured in India a form which he considered distinct and described as *E. orientalis*. Both the eastern and western forms may occur on the coasts of the Indian peninsula, as, from other instances that have fallen under my attention, the eastern and western southward migrations of birds appear to culminate in the Indian region; and therefore possibly Messrs. Blyth and Jerdon are both right, but the birds that they handled were different. At all events, until

I learn satisfactorily that the species was founded by Mr. Blyth through a want of acquaintance with the European bird, and not on a really distinct form, I shall adhere to the name bestowed by him. From the bird figured in Mr. Gray's 'Genera' mine differs in having grey-mottled cheeks, in the tibiæ being bare to a greater extent—but more especially in the form of the bill, which in mine is broader in the stem, expands into more direct alar angles, and terminates at the tip in a broad isosceles triangle. The form of the stem is lost in the *spatula*; and the sides of the apical angle are very nearly straight, and not festooned, as in the sketch. Mitchell, too, shows the stem of the bill quite distinct in the expanse. Mr. Blyth in his 'Catalogue' mentions two specimens (procured at Amherst) in the Museum at Calcutta, which one would expect to be our bird. Dr. Jerdon's description gives the cheek of the Indian species as snow-white. His bird has more white on the wing than mine; and he applies the term "somewhat obcordate" to the expanded bill of his bird, which could scarcely be applied to that of ours. The primaries of my bird have no white except on their shafts and margins; the secondaries and tertials more nearly correspond with Dr. Jerdon's description. The species has probably a summer dress; in fact there are streaks and specks on the sides of the neck and breast which indicate this, as well as some black feathers edged with yellowish-brown on the back; so we will not take other differences in detail of plumage to prove the distinctness of the two species. The two soft pointed dark central tail-feathers project about ·2 in., the black tail-coverts extending to ·33 in. of their ends. The other ten rectrices are more rigid, nearly white, and of almost even length, except the outermost on either side, which are ·1 in. longer. Tail 1·5 inch.; wing 3·4 inches. Length 5·5 inches. Bill ·8 in.; greatest expanse ·42. Bare tibia ·4; tarse ·85; middle toe and claw ·75; lateral toes equal; hind toe minute. Bill and legs dark blackish-green*.

---

* [Mr. Blyth (Ann. & Mag. N. H. 1844, xiii. pp. 178, 179) separated his *Eurhinorhynchus orientalis* from the *E. griseus* of Nilsson (founded on the *Platalea pygmæa*) on account of the discrepancy between the size of the former and that of the latter as given by Shaw from older authors;

Oct. 31st.—I watched the Kites that hovered over the harbour. They pick up offal from the surface of the water with their claws, and as they fly along transfer the morsels to their mouths.

In conclusion, let me point out a slight mistake made by Mr. Tristram in allusion to *Pica sericea* (Ibis, 1866, p. 61). This species descends not only "almost," but *quite* to the tropics, as it is common enough in Macao and about the city of Canton.

Mr. Blyth asks (Ibis, 1866, p. 238) whether the Merlins mentioned by me as seen on a voyage from Bombay to Galle were satisfactorily identified. The birds in question, one of which I saw in a seaman's hand, looked extremely like *Falco æsalon*; but I could not now state positively that they were of that species, as the *Falconidæ*, unless fully adult, require very careful examination before one can be positive of the species.

Many years ago a pair of Hoopoes (*Upupa epops*) took possession of a hole in the city-wall at Amoy, near my house. The hen sat close until the young were hatched, the male frequently supplying her with food during the day. Hoopoes have often bred in the holes of exposed Chinese coffins; the natives hence have an objection to them, and brand them as the "Coffin-bird." The young, when hatched, are naked, but soon get covered with small blue quills, which yield the feathers. The tail or *os coccygis* is carried at right angles, and the fæces are discharged to a distance. The little creature has a

but Dr. Hartlaub has shown (Rev. Zool. 1842, pp. 36–38) that these last, as well as some more recent writers, have given a most incorrect and confused account of the bird. It is, to say the least, very doubtful if it has ever occurred either in South America or Europe. The only localities for the few specimens known, that can be depended upon, are entirely eastern. Mr. Swinhoe is right in supposing it to have a summer dress. A specimen in the possession of Mr. Barrow, F.R.S., has the head, neck, and breast of a fine *rufous* colour (P. Z. S. 1859, p. 201). The slight differences noticed by Mr. Swinhoe between the plumage of his specimen and that described by Dr. Jerdon may, we think, be safely set down to age, sex, or season; and the bill (of which our contributor has sent us sketches) corresponds very well with the figure given in the 'Revue Zoologique' for 1843 (pl. 2).—Ed.]

short bill, and crouches forward, making a hissing noise. It looks a strange compound of the young Wryneck and Kingfisher. They do not stand upright till nearly fledged. Their crests develope at once, but their bills do not acquire their full length till the following year. I am writing this note about the Hoopoes from memory. I forget in what year I made observations on their nesting, and I have not now time to hunt through my file of note-books. As the history of the Hoopoe appears to be so little known at home, I will pay special attention to it in future.

XIV.—*Notices of Recent Ornithological Publications.*

1. English.

The Ninth and Tenth parts of Mr. Gould's 'Birds of Great Britain' made their appearance on the 1st of August and September last respectively, and fully sustain the encomiums that have been passed on their predecessors. The following is a list of the species they illustrate:—

Part IX.

Eagle Owl.
Roller.
Woodcock.
Squacco Heron.
Stock-Dove.
Crested Lark.
Tawny Pipit.
Tree-Pipit.
Thrush.
Blackbird.
Cream-coloured Courser.
Lesser Redpole.
Mealy Redpole.
Savi's Warbler.
Razorbill.

Part X.

Honey-Buzzard.
Jackdaw.
Goosander.
Hooded Merganser.
Robin or Redbreast.
Yellowhammer or Yellow Bunting.
Cirl Bunting.
Ortolan Bunting.
Grey Phalarope (winter plumage).
Ditto (summer plumage).
Red-necked Phalarope.
Turnstone.
Marsh-Tit.
Grasshopper Warbler.
Sabine's Gull.

Anthus campestris, whose appearance as a "British Bird" (a title to which it has far better claims than many other species) was originally recorded in 'The Ibis' (1863, pp. 37–39), here for the first time figures in that character*. We do not know that anything else in these two parts especially calls for remark; but Mr. Gould gives some interesting particulars of the "Chasse aux Grives" (*Turdus musicus*) as carried on in Belgium during the autumnal migration, which will probably be new to most English readers.

The first volume of Mr. Stevenson's 'Birds of Norfolk'† will, we are sure, be welcomed by all our readers in this country with great delight; for we have no hesitation in saying that it is the most meritorious book of its kind that has appeared for many years. Unlike many other authors we could name, Mr. Stevenson has neglected no sources of information bearing on the subject; and he has been singularly successful in obtaining the cooperation of almost every person in the county at all addicted to ornithology; and such persons are, and probably have long been, more abundant in Norfolk than elsewhere. It is unnecessary, we think, to dwell at any length on this work; we will only remark that, though it possibly might have been predicated, it has never before been demonstrated that the *Ornis* of Norfolk is sensibly affected by its proximity, as compared with other English counties, to Scandinavia. This is shown by several indications. The Dipper and Bluethroat which appear in Norfolk are the *Cinclus melanogaster* and the true *Cyanecula suecica* of the north. So also *Anthus rupestris*, as distinguished from *A. obscurus*, has been found there, as before mentioned in these pages (Ibis, 1865, p. 237); while the curious dark-visaged race of *Strix flammea*, which appears to be peculiar to the Cimbric Peninsula and some of the Danish Islands, and which, wonderful to say, does not seem to have ever received a distinct specific name, has also occurred in the county, and the specimen may be seen in the fine Museum at Norwich.

---

* Of course the matter is of no real importance; but we may remark that, in the list appended to Mr. Newman's edition of Montagu's 'Ornithological Dictionary' (p. 397), credit is given to the 'Zoologist' for being "the source whence the record" of this bird's occurrence was obtained, though in the body of the work (p. 195) the Editor rightly attributes "the first notice of this species as British" to this Journal.

† The Birds of Norfolk, with Remarks on their Habits, Migration, and Local Distribution: by HENRY STEVENSON, F.L.S. In two vols. Vol. I. London: 1866. Demy 8vo, pp. 445.

In Mr. Colquhoun's 'Sporting Days' * we find two ornithological facts which require record here. The first is the observation by the author himself of three examples of *Mergus cucullatus* (pp. 20, 21) in the Firth of Forth, on the 5th May, 1853, as he has kindly informed us; and the second, that in the Isle of Bute, on two occasions, *Corvus corone* and *C. cornix* were found paired and breeding together (p. 104). "In both cases the females were black and the males grey."

In 1862 three gentlemen, who, we are glad to say, have since cast in their lot among the 'Ibis' brotherhood, betook themselves to Iceland in the then sanguine hope of finding there the breeding-quarters of some of those birds whose summer-haunts have so long been the puzzle of every ornithologist—egg-dealers (if they are to be believed) excepted. Two of them, Messrs. Shepherd and Upcher, as our readers know, have subsequently won glory in the Holy Land by joining the memorable crusade led by that successful follower of Peter the Hermit, Mr. Tristram; and the first has now, in an amusing little book, given us an account of their Icelandic experiences five years years ago †. Our three friends in the course of their tour visited a part of the island previously unattempted by any English traveller, after endeavouring in vain to establish themselves for the season on the bleak Arnarvatns-heiði. They were more successful in their efforts at Myvatn. The worst of the book is that there is so little ornithology in it; but as the expedition was expressly undertaken in the interest of our science it is only right we should here notice it.

From the notice prefixed to a little pamphlet ‡ which Mr.

---

* Sporting Days. By John Colquhoun. Edinbugh and London: 1866. Small 8vo, pp. 255.

† The North-west Peninsula of Iceland: being the Journal of a Tour in Iceland in the Spring and Summer of 1862. By C. W. Shepherd, M.A., F.Z.S. London: 1867. Fcp. 8vo, pp. 162.

‡ Birds found in Malta and Gozo, with their English, Maltese, and Latin names. By William Grant. La Valetta: 1866.

Sclater has been kind enough to show us, we learn that the author, Mr. William Grant, intends to publish a more extensive work on the Ornithology of Malta. Though the readers of this journal have derived from Mr. Wright's instructive papers published in its pages (Ibis, 1864, pp. 42, 137, and 291, and 1865, p. 459) much information on the subject, we are sure they will be glad to learn more. The present work, however, contains only a list of names, with marks to indicate the comparative abundance or rarity of the 308 species enumerated, if we except the prefatory note above mentioned, in which brief reference is made to the irregularity of birds' visits to the island. In certain years, species which are in general very rarely found there arrive abundantly. For example, last year (1866) *Regulus ignicapillus* and *Cursorius gallicus* passed in great numbers. *Actiturus bartramius* seems to be one of the most recently recorded stragglers.

2. French.

The 'Ornithologie Européenne,' published in 1849 by the late Dr. Degland, provoked, as most of our readers know, from the pen of Prince C. L. Bonaparte one of the sharpest critical reviews to be found in ornithological literature. Nor was the censure, as it seems to us, wholly undeserved. The author had worked, as his critic remarked of him, "without a collection and without a library," two absolutely necessary requirements for the due treatment of the subject; and the results were as might have been expected. Still the Prince's review was of the kind commonly known as "savage," and actuated by a spirit which it is now the fashion to term "Philistinism," whatever that may mean. He says that in countries where the labours of the great German ornithologists, "ces astres lumineux de notre science," are unknown the poor Doctor might pass for a comet, "destinée à populariser l'Ornithologie et à en marquer l'état à la moitié de ce siècle du progrès;" but little consolation was to be gathered from that or from a few other equally equivocal compliments. It is not surprising, therefore, that the author thus mercilessly handled should have prepared to vindicate himself. At first he intended (as we now learn) to publish a supplementary volume, in which he would have replied to the Prince's attacks; but before this could be completed he succumbed, in 1856, to a fatal disease. The materials he had collected for this purpose passed into the hands of his friend M. Gerbe, a well-known French ornithologist, who has now at length been able to publish them, not, however, in the form originally intended, but in the far more preferable one of a second edition, in which they are incorporated so as to make a complete work *.

M. Gerbe informs us that he has done his best to put this edition *au courant* with science, and that he considers he has done enough to justify him in placing his own name on the titlepage alongside of Dr. Degland's, on which last point we quite agree with him. As to the first, we are sorry to say he might have been expected to have done more. He shows, we admit, a very good knowledge of French, and to a more limited extent of German, ornithological literature since 1849; he is also acquainted with the third edition of Yarrell's work, published in 1856, and with such ornithological papers as have appeared in the 'Annals and Magazine of Natural History;' but, as a rule, most other foreign journals are ignored or quoted at second-hand. So, at least, we imagine; for we find 'Naumannia' inserted in the list of works cited as dating from 1850, and 'The Ibis' from 1853—pleasant, certainly, to be taken for six years older than we really are! However, we would readily pardon this mistake as a mere clerical or typographical error, did we not find the "holy fowl" accused of an astounding assertion. Speaking of the mysterious advent to Europe of our old friend *Syrrhaptes paradoxus*, M. Gerbe (vol. ii. p. 30) says:—"Ainsi, d'après le journal *l'Ibis* (1859, p. 471), un individu, faisant actuellement partie du Musée de Liverpool, a été tué en 1859 dans le canton de Norfolk. Cet individu, d'après l'auteur de l'article, appartenait probablement à la bande qui avait été vue, le 9 juillet, à Tremadoc en Galles, et dont a parlé M. T. G. Moore dans le *Zoologist* (1859, p. 6725). Le même journal

---

* Ornithologie Européenne ou Catalogue descriptif, analytique et raisonné des Oiseaux observés en Europe. Deuxième édition, entièrement refondue par C. D. Degland, Z. Gerbe. Paris: 1867. 2 vols. 8vo, pp. 610 & 637. (Baillière.)

cite une autre capture faite dans le Jutland, en 1861." Now the several mistakes in the above extract, which our readers will know how to correct for themselves, are also made precisely in the same manner by Dr. de Montessus in the 'Revue de Zoologie' (1863, p. 403). The author last named certainly commits an additional geographical blunder (speaking of Jutland as a "contrée de Groënland"), which M. Gerbe avoids; but it is very singular that the latter should have otherwise so carefully fallen into the same mistakes as his predecessor if he had personally consulted the original notices; and we are accordingly afraid M. Gerbe has not done 'The Ibis' the honour of personally consulting its pages.

We have selected this instance of M. Gerbe's neglect of the ordinary channels of information partly because of its bearing on this journal; and it would be extremely easy to cite a large number of similar cases; but by so doing we should probably give a very unfair impression of his labours, in praise of which much is to be said. Indeed to do justice to the work, a commentary by a competent writer, such as that on Dr. Jerdon's 'Birds of India' with which Mr. Blyth has enriched our pages, would be required. But we regret to say that we have no hope of being able to lay such a commentary before our readers, and we must content ourselves by expressing a wish that the next writer on European ornithology may not blindly follow M. Gerbe's statements under the idea that he has exhausted all existing sources of information on the subject.

We have great pleasure in stating that M. Alphonse Milne-Edwards has commenced the publication of his researches on the Fossil Birds of France, of which we lately spoke (Ibis, 1866, p. 413), and we are indebted to his kindness for the valuable gift of the three parts which have already appeared*. These contain seven sheets of letterpress and fifteen lithographic plates very beautifully executed. It is perhaps too early to speak of the general principles of the work; but we have een quite enough to enable us to declare that this important subject is being most ably treated; and we can well understand the 'Grand Prix des Sciences Physiques' being adjudged to the author. At present the only extinct species illustrated in the plates are *Anas blanchardi*, from the tertiary deposits of the Allier, and *A. velox* and *A. sansaniensis*, from the miocene of the hill of Sansan (Gers). Of the former, very considerable remains exist. Fossil bones of *Anas boschas*, *A. crecca*, *Cygnus ferus*, and *Anser cinereus*, from caverns or peat, are also figured. The work, it is announced, when complete, will consist of two volumes of text and one of plates, about two hundred in number, and the price to subscribers the modest sum of 200 francs only.

---

* Recherches anatomiques et paléontologiques pour servir à l'histoire des Oiseaux Fossiles de la France. Par ALPHONSE MILNE-EDWARDS. Livraisons 1-3. Paris: 1867. 4to.

At a meeting of the Société Impériale d'Acclimatation, on the 20th of April 1866, M. Geoffroy announced the arrival of a collection of bird-skins, made in the north of China and sent by M. Dabry, French consul at Hankow, in which were contained some specimens of a beautiful new Monâl, proposed to be called *Lophophorus lhuysi*. It has a longer and stronger bill and stouter legs than the well-known *L. impeyanus*. Its tail-feathers are ornamented by metallic-blue reflexions. The head has no crest, strictly speaking; but the feathers of the nape are somewhat elongated. L'huys's Monâl is a larger and finer bird than its congener, the well-known Impeyan Pheasant.

3. DUTCH AND BELGIAN.

The concluding portions of the third volume of the 'Nederlandsch Tijdschrift voor de Dierkunde' consist almost entirely of ornithological papers, contributed by MM. Schlegel, Crommelin, Pollen, and Keulemans. The very small space which we are able to devote to literary notices compels us to speak of them in the briefest manner possible. Professor Schlegel's three articles, entitled "Observations Zoologiques," contain descriptions of several new species, all, we believe, discovered by Dutch travellers or residents in the Malay Archipelago, besides numerous facts or opinions respecting other birds. In addition to these, he has longer or shorter notices of the species of the genera *Megapodius*, *Chalcophaps*, *Tanysiptera*, *Cacatua*, and *Nisus*. M. Crommelin's papers refer chiefly to the ornithology of Holland; and M. Keuleman's contribution consists of remarks on the birds of the Cape Verde Islands, and the Ilha do Principe in the Gulf of Guinea.

M. de la Fontaine has completed the ornithological portion of his Fauna of Luxembourg*, the first part of which we noticed last year (Ibis, 1866, p. 210). Two hundred and seventy-six species are enumerated; but from this number should probably be deducted nearly a dozen for poultry, pigeons, and species of a very doubtful character, such as *Cuculus hepaticus* (p. 161) and *Perdix damascena* (p. 165). The author includes "*Ardea minor*, Wils." (p. 214), which he curiously states is probably identical with the Common Bittern. We greatly doubt his having seen a real example of the American species so named by Wilson, and we are not aware that Professor Schlegel has ever refused to acknowledge the distinctness of *Botaurus lentiginosus* and *B. stellaris*. As the nationality of the Luxembourgeois is just now supposed to be a matter of importance in high quarters, perhaps M. de la Fontaine will pardon our pointing out this case; for it would seem undesirable to further complicate the question by the needless introduction of an American element.

Under the title of 'Archives Cosmologiques' and the editorship of M. Alphonse Dubois, a new periodical has recently made its appearance at Brussels. How far it will be successful we cannot pretend to say; but, in the interest of a special branch of natural science, we must protest against the publication, in a journal which professes to take in, besides Biology, Medicine, Agriculture, the Arts, and Industry, of any papers but those of a most general character. When we consider the enormous extent of periodical literature in these days, it is beyond the power of almost all private persons to read, and still less to purchase, any but journals mainly devoted to their own special pursuits; and, without passing an opinion on the "Note sur le nid du *Megalophus regius*," illustrated by a highly coloured plate of the bird, its nest, and its eggs, which the editor himself contributes to the first number of his new magazine, we cannot but wonder at its association with other articles treating of chemical, botanical, and astronomical subjects.

---

* Faune du Pays de Luxembourg, ou Manuel de Zoologie contenant la description des Animaux Vertébrés observés dans le Pays de Luxembourg. Par ALPHONSE DE LA FONTAINE. Oiseaux.—Deuxième Partie. Luxembourg: 1866. 8vo, pp. 174.

4. German.

To the kindness of our good friend Dr. Hartlaub we owe the receipt of a separately printed copy of an Introduction to the Ornithology of the Feejee, Samoa, and Tonga Islands*—a subject on which he, in conjunction with Herr Otto Finsch, has been some time engaged, and respecting which we look with impatience for the results of their united labours. In this introduction we have first a rapid but comprehensive sketch of the progressive steps in our knowledge of the ornithology of this interesting part of the world, from the time of Banks and the two Forsters, the shipmates of Cook, down to the present day. This is followed by an equally concise physico-geographical account of the three groups of islands; and the essay is concluded by a masterly summary of their ornithological features. We suppose that detailed accounts of the species, in the manner of Dr. Hartlaub's well-known treatises on the birds of West Africa and of Madagascar, will in due time make their appearance, and we cannot doubt that the whole book, when completed, will be a worthy successor of those useful works. Meanwhile we venture, notwithstanding that the remark is of a somewhat personal nature, to observe that the egg of *Didunculus* has not been made known, as Dr. Hartlaub states, through the means of our learned and excellent colleague Mr. Sclater, who, we are quite sure, would be the last person to wish that any credit due to another should be attributed to him. It is to Mr. Bartlett, who rescued the interesting specimen from the man who brought the living bird to England, and before depositing it in the British Museum placed it in our unworthy hands for description, that the honour must be given; and but for an accidental mischance, its portrait would have long since appeared in the Zoological 'Proceedings.'

---

* Einleitung zur Ornithologie der Viti-, Samoa- und Tonga-Gruppe, von Dr. G. Hartlaub. (Separatabdruck.) 8vo, pp. 24.

Though we must own that we have not read the three somewhat bulky volumes in which Baron J. W. von Müller* records his adventures in the United States of America, Canada, and Mexico, we feel it a duty to our readers to point out the existence of the work, of which some of them perhaps might otherwise never hear. This, too, is the more incumbent upon us because the Baron's third volume (which, we believe, is published separately with the title of 'Beiträge zur Geschichte, Statistik und Zoologie von Mexico') contains a systematic catalogue of the Mexican Vertebrates, in which, as might be expected, the birds figure largely, 611 species being enumerated. Of these, *Trogon erythronotus, Tachyphonus schlagintweiti, Melospiza pectoralis,* and *Aimophila* (lege *Hæmophila*) *tolteca* are described as new. The work is embellished with some very pretty illustrations; but of its literary qualities, for the reason above given, we naturally abstain from giving any opinion, though it would seem impossible that it should not contain much that is of interest to those who occupy themselves with the ornithology of the New World.

Dr. Rudolph Dieck's treatise on the Sternum of Birds†, though creditable enough for a maiden effort, would perhaps hardly require notice here but for one of the theses maintained by the author, "Sternum ad definiendum oscinum genus optimum esse signum," a conclusion to which we cannot give our general assent, since it is in the group to which the name *Oscines* has been assigned that the greatest uniformity of sternal structure is observable. We are also somewhat surprised to find the new Doctor speaking of "claviculæ avium, quæ etiam ossa *coracoidea* nominari solent;" for we had thought it was now universally recognized that in birds the furcula, and not the coracoids, represented the clavicles. The author gives a list of the species (115 in number) whose sternums he has closely examined. A large proportion of them are American, and among them we find that not at all common bird *Ictinia mississippiensis*; but there is a great lack of the forms which deviate most from the ordinary rule, such, for instance, as occur among the *Picariæ* and *Grallæ*; and it is probably from this cause that Dr. Dieck abstains from stating what his views are on the general classification of birds.

---

* Reisen in den Vereinigten Staaten, Canada und Mexico von Baron J. W. von Müller. In drei Bänden. 8vo. Leipzig: 1864–5.

† De Sterno Avium, dissertatio inauguralis quam &c. publice defendet Auctor, Rudolphus Dieck. Halis Saxonum. 8vo, pp. 31. [1865.]

5. AMERICAN.

Mr. Lawrence in the 'Annals' of the New York Lyceum for December last, describes as new six species of Birds—*Hirundo æquatorialis* from Ecuador, *Thamnophilus leucopygus* and *Empidonax pectoralis* from the Isthmus of Panama, and three Humming-birds. To Mr. Gould we are indebted for the information that he has received from Mr. Lawrence the types of these last, that *Heliodoxa henryi* is identical with *H. jacula,* that *Thaumatias viridicaudus* is the female of *Chrysuronia humboldti,* and that *Amazilia* (*Pyrrhophæna*) *graysoni* differs only in size from *P. cinnamomea.*

In our notice in the last 'Ibis' of Dr. Coues's paper on the ornithology of Arizona (*suprà,* pp. 130, 131) we omitted to mention, as we ought to have done, that the bird referred with doubt by that gentleman in our own pages (Ibis, 1865, p. 164) to *Vireo solitarius* is his new *V. plumbeus,* and that spoken of by him in the same interesting article (p. 165) as being either *Melospiza melodia* or *M. heermanni* proves to be *M. fallax.*

XV.—*Letters, Announcements, &c.*

THE following letters, addressed "To the Editor of 'The Ibis,'" have been received:—

Kustendjie, Bulgaria, 1866.

SIR,—The claims of *Aquila nævioides* to a place among the birds of Europe have several times been urged in 'The Ibis.'

My observations have convinced me that it is a permanent resident in this neighbourhood. I have now a living example of this species, taken from the nest more than two years ago. In 1865 several were noticed soaring over a large ravine in a locality some twenty miles distant from the scene of the former capture; and though an egg was found which agreed exactly with Dr. Bree's figure, it could not be authenticated and was left. In April last we were fortunate enough to secure three eggs in this same locality, the bird being shot. Some ten or twelve more were seen; but time did not allow of a longer search.

On the 5th of June, 1866, an example of *Larus minutus* was shot here as it was rising from the nest; and under it was found an egg, which I am forwarding to you. This I believe to be a most interesting specimen.

I am, &c.,
W. H. Cullen.

Auchnaba House, Lochgilphead,
18th December, 1866.

Sir,—When corresponding with Mr. A. G. More as to the occurrence of different birds in Argyleshire, I believe that I mentioned the Turtle-Dove (*Turtur auritus*) as one which I had little doubt I had seen, though not obtained. This belief is now strengthened by the fact that my father's keeper shot one last October, not far from the same locality. This may be interesting to some readers of 'The Ibis.'

I am, &c.,
J. W. P. Orde.

Cape Town, 10th January, 1867.

Sir,—On my leaving England in November last I promised you that I would do all in my power to clear up the mystery of the St. Helena "Wire-bird," and I have now the pleasure of sending you a male and female shot by myself, with such an account of their habits as I could glean either by personal observation or by report from the residents on the island.

I have little to record of ornithological lore during our voyage. We left Southampton on the 8th of November in rather bad weather, and few of our usual coast-birds were about. Plymouth was left on the 10th, and we next sighted the Spanish coast about Finisterra in moderate weather; here we fell in with flocks of Guillemots (*Uria troile*) and Little Auks (*Mergulus alle*), the latter chiefly in pairs. We saw no more birds thence to the Canary Islands, off which we saw Terns and Gannets; the latter were, I think, *Sula melanops**.

Our next visitor surprised me. In lat. 3° 2′ N., long. 10° 47′ W., a "Cape Pigeon" (*Daption capensis*) accompanied the ship for some distance. I have never seen this bird so far north in any of my voyages; and so said Captain Dickson and the officers of the ship. In lat. 1° 35′ S., long. 9° 15′ W., a flock of *Onychoprion fuliginosus* passed us early in the morning. On the 2nd of December, lat. 4° 21′ S., long. 8° 25′ W., a Frigate-bird hovered for a short time over our mast, and a "school" of porpoises gambolled below. These are all the birds we saw till we made St. Helena, except when running into St. Vincent's (Cape Verde Islands) on the 22nd, when, of course, a few Terns were present. I have never seen a Gull there, which surprises me. The island was looking green and, for St. Vincent's, lovely. To my great vexation we were put in quarantine, because we had not a clean bill of health from Portsmouth. I had promised myself a little Quail-shooting and some specimens of *Passer jagoensis*, but could only "look and long." The consul told me Quail were more plentiful than he had ever known them, and his son had that morning shot five brace, close to his house, which we could see most invitingly from the ship. An Osprey flew over us as we lay at anchor. I have never been in here without seeing several of these fine fish-hawks. *Neophron percnopterus* did not seem so abundant as on my first visit twelve years ago; perhaps the increase of the town has scared them.

We landed at St. Helena on the morning of the 6th of December. I had written by a previous mail to my friend Mr. Mellis, begging him to have horses ready to enable me to reach the spot where the "Wire-birds" lived; and as soon as we anchored I received a note from him, telling me all was prepared and that I must go to a place near his residence, called New-ground, on which he had the day before seen some birds. Finding that it was only two miles off, I determined to walk, rather than ride, in the hope of picking up some other birds; and just as I reached the top of the celebrated Ladder, by the carriage road, Mr. Mellis himself appeared on horseback coming to pilot me to the spot. Ten minutes walk brought us to as desolate and barren a scene as any one could desire—a plateau of arid burnt-up scoria, rent by fearful ravines, in which a few *Cacti* struggled for existence. Here and there an *Asclepias* looked green and inviting to the miserable goats, and was frequented by little bands of a red butterfly, *Danais chrysippus,* and the ubiquitous *Cynthia cardui.* Now and then a little flock of the Australian *Geopelia tranquilla* rose and flew before us, or a Java Sparrow or Cape Waxbill (all introductions) chattered on the stunted vegetation.

---

* [Qu. *S. melanura*?—Ed.]

As we surmounted the crest of a ravine, on to the plain called the New-ground, a bird, which I took to be *Ægialites pecuarius,* rose a little ahead of us, and, when too far for a shot, Mr. Mellis exclaimed "that is a Wire-bird!" I confess at the moment I was disappointed. I had made up my mind to find it a Plover of some kind, and at one time half fancied, from the descriptions, it was a small Stilt-Plover; but I hardly thought it could be my old friend *Æ. pecuarius.* However, as the bird flew on, it struck me it was larger than that bird, and differently marked, and my hopes rose again. Mr. Mellis meanwhile detected another on the ground, which I stalked for some time; but it kept continually running at a great pace about eighty yards from me, and would not let me approach nearer. At length I fired and it fell, but rose again, flew a little, and finally disappeared, badly wounded, over the edge of a ravine.

The report of my gun raised several others, and after stalking first one and then another, I concealed myself behind a cactus, and Mr. Mellis put one up at a distance and drove it towards me. It came within easy range, and a half charge of No. 10 shot made the prize my own; and it was with much delight that I found I had a bird with which I was not acquainted, though closely resembling several of the small *Charadriidæ* common in various places.

While sitting on the ground arranging the feathers of my bird, and wondering what it could find to eat in such barren spots, I detected some odd-looking excrescences on the blocks of scoria about us, and a closer examination showed these to be small shells of the genus *Succinea*. These, together with *Coleoptera*, form, as I discovered by their stomachs, their chief food. A little stalking and dodging procured me four more specimens, and I returned to the steamer well satisfied with my day's work.

Mr. Mellis informs me that they lay three or four eggs, of a pale colour (whitish) dotted with black, in the centre of a mass of cow-dung, making no nest, that they remain in the island throughout the year, and frequent open plains—water seemed no attraction to them. They are called "Wire-birds," from the fact that their legs are long and thin. I suppose they appear absurdly so to the aborigines of the island, who have so few birds to look at.

On comparing my specimens with *C. pecuarius*, Temm., I find them to be larger every way, and to be lighter on the breast and belly. They come, however, very close*.

On the 11th December, lat. 28° 23′ S., long. 0° 20′ E., at nightfall, we passed a flock of "Cape Hens," (*Procellaria æquinoctialis*) roosting on the water: these were the first we had seen. Next day the little yellow-footed Wilson's Petrel (*Thalassidroma wilsoni*) hovered astern throughout the whole day; and on the 14th, in lat. 32° 55′ S., long. 9° 47′ E., our first Albatros (*Diomedea exulans*) appeared. From this till our arrival at the Cape, birds were continually in sight; but it was not until we made the land that any quantity appeared.

---

* [Mr. G. R. Gray has most kindly given us his valuable assistance in the determination of the specimens sent us by Mr. Layard. The species appears to correspond accurately with that described and figured by Temminck as *Charadrius pecuarius* (Pl. Col. 183), the type of which is said to have come from the Cape of Good Hope. A smaller species, however, seems to have usurped the name bestowed by that naturalist, and to have been confounded with the true *Æ. pecuarius* by the majority of authors. This we believe to be the *Æ. kittlitzi* of Prof. Reichenbach (Synops. Avium, tab. cv. fig. 1063). It would seem to be not uncommon at the Cape, where we should presume that the true *Æ. pecuarius* is rare, from the fact of its being previously unknown to an ornithologist with so much experience as Mr. Layard—if, indeed, it ever does occur there; for the localities assigned by Temminck are not, as a rule, to be entirely trusted.

I send you, in addition to the skins, the sternums of both, and a pair of the little *Succinea* on which they feed. Mr. Mellis has promised to procure the eggs; and any further information on their habits which he can get shall be sent to you. Dissection showed that the birds were not breeding.

I am, &c.,
E. L. Layard.

Newcastle-on-Tyne, 14th March, 1867.

Sir,—In 1838 I sent to the 'Annals of Natural History' (vol. ii. p. 310) a notice of a small Wren which I had shot at Hartley in the September of that year, and which I identified with the *Regulus modestus* of Mr. Gould's 'Birds of Europe;' but I now find my bird to be distinct from the species there described and figured. The Rev. H. B. Tristram has kindly favoured me with a view of a series of specimens of both species. The one is distinguishable from the other chiefly by a broad belt of pale yellow across the rump; and that gentleman informs me that the species so characterized was described by Pallas under the name of *Motacilla proregulus*. The other is given by Gmelin under the denomination of *M. superciliosa*. Now my specimen has no such belt as I have mentioned across the rump, while that figured by Mr. Gould possesses this character. My bird therefore must stand as *Reguloides superciliosus* (Gmel.),

---

Æ. kittlitzi differs from *Æ. pecuarius* chiefly, but remarkably, in size. Mr. Gray has been good enough to show us a sufficiently large series of both species, and we do not think any reasonable doubt can be entertained as to their distinctness. Specimens of the true *Æ. pecuarius* from St. Helena, sent under the local name of "Wire-bird," were already in the British Museum. They agree exactly with Mr. Layard's examples.—Ed.]

while the specific name *modestus* will have to drop into a synonym of *Reguloides proregulus* (Pall.)*.

A fine mature male example of the Black Kite, *Milvus migrans* (Bodd. 1783) (*Falco ater*, Gmel. 1788), came into my possession in a fresh state on the 11th of May, 1866. It was taken in a trap by Mr. F. Fulger, the Duke of Northumberland's game-keeper, a few days before, in the Red Deer park at Alnwick. This is, I believe, the first time that this fine rapacious bird has occurred in Britain. The plumage was in very good condition, except on the lower part of the body (where it had sustained some injury from the trap), and agrees with that of mature specimens in my collection, which I received from the continent some years ago. It was proved by dissection to be a male.

On the 15th of February last I saw a fine specimen in a fresh state of a mature Ivory-Gull (*Larus eburneus*, Phipps). It was obtained by Mr. E. Crawshay a day or two before, at Islay, on the west coast of Scotland. The bird was in very poor condition and had no appearance of having been shot.

I am, &c.,
JOHN HANCOCK.

* [Mr. Swinhoe had already shown (P. Z. S. 1863, p. 297) the distinctness of *R. superciliosus* and *R. proregulus*, which had been thought (Journ. f. Orn. 1853, pp. 81–96, taf. i., and 'Ibis' 1862, pp. 53–57) to be synonymous; but he was not aware that the *Regulus modestus* of Mr. Hancock's former notice and the *Regulus modestus* of Mr. Gould were specifically different. He rightly identified Mr. Hancock's specimen with *R. superciliosus*, but quoted "*Regulus modestus*, Gould," as a synonym, under the impression, which, we believe, has hitherto generally prevailed, that the bird shot in Northumberland and that obtained in Dalmatia were specifically identical. We have no doubt that our correspondent, Mr. Hancock, is right in what he now says; and the common English name of "Dalmatian Regulus" ought to give place to that of "Yellow-browed Warbler," bestowed by Latham in 1783. It remains to be proved to which of the two species the numerous examples met with by Mr. Gätke in Heligoland belong: those obtained near Berlin, to judge from the plate given by Dr. Cabanis (J. f. O. 1853, *ut supr.*), doubtless pertain to *R. superciliosus*.—ED.]

23rd March, 1867.

Sir,—It is well known that in both species of the genus *Gypaetus* the sclerotic coat of the eye is visible, forming a brilliant orange-red ring encircling the iris.

I have been under the impression that no raptorial birds except the *Gypaeti* exhibited this peculiarity; but on examining to-day the fine immature specimen of *Cathartes californianus* now in the gardens of the Zoological Society, I have observed a similar formation of the eye in that Vulture, with the exception of the sclerotic coat being only visible round the posterior portion of the eye, thus forming a semicircle instead of a complete circle as in the *Gypaeti*. In the Californian Vulture at the Gardens the sclerotic coat is of the same orange-red hue as that of the *Gypaeti*, the colour of the iris being dark brown.

J. H. Gurney.

Zoological Society of London,
11 Hanover Square, London, W.
March 25, 1867.

Sir,—By a communication from my friend Mr. Otto Finsch of Bremen, I learn, what I had previously suspected to be the case, that *Gallinula pumila*, described and figured by me (Ibis 1859, p. 249, pl. vii.), is the same as *G. angulata*, Sundevall (Œf. K. V.-Ak. Förhandl. 1850, p. 110; Schlegel, Mus. P.-B. *Ralli*, p. 49). Dr. Hartlaub's *G. minor* (Journ. f. Orn. 1860, p. 341) is another synonym of the same species. This rectification of synonymy may be useful to Mr. Layard, whose work on the birds of South Africa we are all anxiously expecting.

Your obedient Servant,
P. L. Sclater.

During the past few weeks Professor Huxley has been giving, in the theatre of the Royal College of Surgeons, a course of lectures of remarkable interest to ornithologists. The subject has been the *Sauropsida*, or that group of Vertebrates which contains the classes *Reptilia* and *Aves*. We must express our extreme gratification that a Comparative Anatomist of the first rank should at last have deigned to study birds with the view of assisting special ornithologists in their labours as regards classification; for we recently had to lament the small amount of light thrown on this subject by another high authority. Ornithologists have been very much abused, or at least ridiculed, by some other classes of naturalists for the many very trivial characters on which weight is laid in the systems most in vogue—but, we think, unfairly so. Surely it has been the business of comparative anatomists (the men who are spoken of as having "large views") to put special ornithologists in the way of knowing better, particularly by pointing out the most essential characters in the osteology of birds. Now we have hitherto been almost entirely devoid of such assistance, though we must not pass over the well-meant efforts of MM. Lherminier and Blanchard, or even of De Blainville and a few others. The great Cuvier himself, as Prof. Huxley well remarked, never seems to have exerted his mind on the class *Aves* as he did on other animals; and his example has been imitated by nearly all his followers. We hope that a better time is in store for us, and that things will be placed on a surer foundation by the publication of Prof. Huxley's researches, which he is about to communicate in a more complete form to the Zoological Society. This being the case, we abstain from giving here any abstract of the results which he has made known; but in due course of time we shall, no doubt, have to announce them to our readers.

Naturalists are pretty well agreed as to the propriety of designating a species by the name under which a description of it was first published; but the question what constitutes "publication" seems, although several times discussed, never to have been settled; for the rule of the British Association on this point is deemed too arbitrary by many persons. A case has lately occurred in which some definite decision must be arrived at. At the meeting of the Zoological Society on the 28th of February last was read a paper by our contributor Mr. E. P. Ramsay, describing a new bird under the name of *Pardalotus leadbeateri*. The March number of 'The Annals and Magazine of Natural History' contains a description of the same species by Prof.

McCoy, under the name of *Pardalotus xanthopygus*. Which of these names must be considered entitled to priority? We shall be glad if any naturalists who have paid attention to the difficult subject of nomenclature will favour us with their opinions on the subject.

Mr. Robert Gray, of Glasgow, has in preparation an illustrated work on the birds of the west of Scotland, including the Outer Hebrides, a district respecting the ornithology of which very little is as yet known. From this gentleman's intimate personal acquaintance with the subject, we cannot doubt but the book will contain an abundance of interesting information, and be very acceptable to naturalists in general.

It is fortunately some time since we have had to record the loss of any of our fellow workers; but now we regret to say we have received intelligence of the deaths of three ornithologists to whose labours our science is much indebted. Dr. LÉOTAUD of Trinidad, whose recent work on the birds of that island was the subject of some valuable remarks by Mr. Sclater in our last Number, is the first. The second is our friend Dr. HENRY BRYANT of Boston, who died, we understand, during the winter in the West Indies, whither he had been for some years in the habit of going for the sake of his health. His loss is deeply regretted by all who knew him, and by none more than his fellow citizens and the members of the Boston Natural History Society, to whom he had munificently presented the entire collection of the late Baron Lafresnaye, which he had recently purchased at a very large price. The third is our own countryman Mr. PRIDEAUX JOHN SELBY, whose 'Illustrations of British Ornithology' and various other scientific works gave him a just claim to the gratitude of all votaries of the study, though for some years past he had taken no active part in its prosecution. He died at Twizell House, his beautiful seat in Northumberland, on the 28th of March in the eighty-seventh year of his age.

THE IBIS.

NEW SERIES.

No. XI. JULY 1867.

XVI.—*The Distribution and Migrations of North American Birds*[*]. By Spencer F. Baird, Assist. Sec. Smithsonian Institution, For. Mem. Z.S.

[Abstract of a memoir presented to the National Academy of Sciences, January 1865.]

It is well known to all students of Natural History that the zoology of America or the New World is very different from that of the Old World, and that with these two grand divisions there are, in each, various subdivisions of greater or less importance. To Dr. Sclater[†] is perhaps due the merit of having been the first clearly to define the "Regions" into which the animal life of the terrestrial globe, the birds especially, may be divided, and to point out approximately their relative magnitude and boundaries as well as their comparative richness in species of birds. Some of his details have been corrected and improved by Mr. Wallace[‡]; but the conclusions of Dr. Sclater are in the main those which have received the support of most naturalists of the present day, and his details will ever mark an era in the science of zoological geography.

---

[*] From the 'American Journal of Science and Arts,' vol. xli. January, March, and May 1866.

[†] Journal of Proceedings of the Linnean Society: Zoology, ii. 1858, p. 130. (Read June 16, 1857.)

[‡] Ibis, 1859, p. 449.

Dr. Sclater, in the article above alluded to, presents the following scheme of the arrangement of "Regions" as best illustrating their relationship:—

Palæogean or Old World Creation.			Neogean or New World Creation.
	I. Palæarctic or North Old World Region.		V. Nearctic or North American Region.
II. Western Palæotropical or Ethiopian Region.	III. Middle Palæotropical or Indian Region.	IV. Eastern Palæotropical or Australian Region.	VI. Neotropical or South American Region.

The boundaries of these regions, as defined by Dr. Sclater, with Mr. Wallace's corrections, embrace the following countries:—

I. *Palæarctic Region.*—All Europe and Africa north of the Sahara, and all continental Asia north of about the parallel of 30° N. lat., including the whole mountainous country and plateaux of Central Asia, as well as Japan and the Kuriles. The Aleutians, assigned by Dr. Sclater to this region, appear to belong more to North America.

II. *Ethiopian Region.*—This embraces all of Africa south of the Sahara, and on the eastern side all south of about 30° N. lat., as well as most of Arabia, except the portion along the Indian Ocean and the Persian Gulf. It includes also Madagascar and the adjacent islands, as Mauritius, Bourbon, &c. The Sahara Mr. Wallace considers as belonging to neither the Palæarctic nor the African region, but to occupy the position of a sea, and to be essentially destitute of land species.

III. *The Indian Region.*—This includes the low lands of continental Asia, about south of 30° N. lat., and the portion of Arabia excluded from the Ethiopian Region, as well as Ceylon, Sumatra, Java, Borneo, and the Philippines. It is the country washed by the Arabian Sea, the Persian Gulf, and the China Seas, and its south-eastern limit passes between the islands of Bali and Lombok, between Borneo and Celebes, and between the Philippines and the Moluccas.

IV. *The Australian Region.*—This includes Australia, New Guinea, Tasmania, New Zealand, and Polynesia, also Lombok, Celebes, the Moluccas, and the Sandwich Islands. Mr. Wallace calls attention to the fact of the very great dissimilarity between the faunæ of Bali and Lombok, and of Borneo and Celebes, although geographically very near each other, while islands of the Indian region, as well as of the Australian, are respectively very closely allied, although much more remote from each other than those just contrasted. The explanation of this difference he finds in the comparatively slight depth of water between islands of the same region, while the channel separating those of the different regions is almost unfathomable. By an elevation of 50 fathoms, all these islands of one region would almost become joined to the mainland of their respective regions, while the channel separating the latter would still constitute a physical barrier. Hence he infers that subsequent to the original peopling of the Indian and Australian regions, a subsidence into the sea and the consequent production of islands, while it ultimately modified the minor characters of the faunæ, left the broad outlines unchanged.

V. *North American Region.*—Dr. Sclater divides this from the South American somewhere in Mexico, the line reaching further north on the coast, and more to the south in the central mountainous portion. Wallace draws the line about the parallel of 22°, or near the Tropic of Cancer. To the north it includes Greenland.

VI. *South American Region.*—This embraces, according to Sclater and Wallace, the rest of continental America, the West Indies, the Galapagos, the Falklands, &c., while Wallace even includes (very erroneously however) the Sandwich Islands.

Of the Regions thus sketched out, I propose to confine myself to the two last mentioned, or those of the New World, and more especially the portion included in the United States and north of it, and to point out the minor subdivisions and peculiarities of the ornithological faunæ of the same. Before proceeding, however, to this subject, I may premise that I cannot quite agree with Dr. Sclater in referring the West Indies to the South American Region, but prefer to consider it as having independent rank as—

VII. *West Indian Region.*—In winter a large proportion of the inhabitants of the islands are visitors from North America; but the summer fauna is very distinct. The islands nearest to North and South America have of course an impress of the characteristics of these continental areas respectively; but as a general law it may be stated that of the species of land birds peculiar to the West Indies, exclusive of the diurnal Raptores and Columbidæ, a large proportion belong to genera found equally in North and South America, as *Vireo, Turdus, Mimus, Polioptila, Dendrœca, Tyrannus, Myiarchus, Contopus, Myiadestes, Progne, Petrochelidon, Icterus, Sturnella, Colaptes,* &c.: an almost equal proportion belong to genera peculiar to the West Indies, and characterizing several islands, as *Gymnoglaux, Mimocichla, Spindalis, Phonipara, Tachornis, Loxigilla, Saurothera, Blacicus, Todus**, &c., or else more or less peculiar to one island respectively, as *Teretristis, Melopyrrha,* &c., to Cuba; *Siphonorhis, Polytmus, Glossiptila, Hyetornis, Laletes,* &c., to Jamaica; *Dulus,* &c., to Hayti. Where the species belong to continental genera not represented in North America, they are more generally of Mexican and Central American forms and rarely of strictly South American.

The following table of resident land birds of Cuba and Jamaica, exclusive of diurnal *Raptores* and *Columbidæ,* although approximately complete only, may serve to illustrate more fully the preceding remarks:—

	Cuba.	Jamaica.
South American genera	..	1†
Central American and Mexican	..	1‡
South and Central American	2	3
North and Central American	5	2
North, Central, and South American	16	10
West Indian	8	6
Peculiar to the island	3	6
Total	34	29

The species of truly West Indian birds are remarkable for their local distribution, comparatively few being found on more than one of the larger islands; and, what is still more remarkable, when the contrary is the case, an intervening island may be destitute of the species. Thus Cuba lacks several species common to the Bahamas and to Jamaica.

---

* *Todus mexicanus* of Lesson is a Porto-Rican species.

† *Nyctibius.*

‡ *Phonipara.*

Professor Agassiz (Types of Mankind, 1854) has urged very strongly the recognition of an Arctic and an Antarctic Region or "realm"—a point in favour of which there is much to be said, but which cannot be discussed in the present article. He also anticipates Dr. Sclater in regard to some of his views; but the facts at command at the time did not allow him to define the boundary lines of the regions with the same precision. Still more recently Dr. Pelzeln (Reise der Novara, 1865) insists likewise upon an Antarctic Region.

Proceeding, now, to the especial subject of the present article, the mapping out of North America with reference to the geographical distribution and migrations of North American birds, it may be premised that in the article above referred to, by Professor Agassiz, in Nott and Gliddon's 'Types of Mankind,' we find the first attempt to mark off the zoological provinces of the New World—and very successful, considering the insufficient data accessible at the time. In 1859 * Dr. Leconte sketched out their boundaries in North America with more precision, having particular reference to the distribution of Coleopterous insects.

The subdivisions by Dr. Leconte of these provinces, as based on the study of their *Coleoptera,* do not agree strictly with those of the ornithological faunæ, especially in the considerable number of local areas which he has adopted. This difference is, however, easily intelligible when we bear in mind the much superior power of flight and innate tendency to migration of the bird as compared with the insect, the distribution of reptiles agreeing much better with his outline than that of birds.

To present the general principles of distribution to which I have been led by an examination of the large collection of specimens in the museum of the Smithsonian Institution, I may say that, as far as its ornithology, and, to a considerable degree, its vertebrate zoology in general, is concerned, North America appears to be divided into two great regions, an eastern and a western, which in the United States are of approximately equal extent, but very unequal further north. The eastern division extends from the Atlantic seaboard, westward across the Alleghanies (which affect the distribution of species but little) and over the valley of the Mississippi and its fertile prairies to about the 100th degree of longitude, or to the beginning of the sterile plains. Its western border is not sharply defined, nor strictly in a meridian line, but somewhat oblique, and interdigitates with the western division by extending westward along the river-bottoms, some species, as *Galeoscoptes carolinensis*, *Vireo olivaceus*, &c., occurring as far west as Fort Benton, or even Fort Colville.

---

* "Coleoptera of Kansas and New Mexico," Dec. 1859, Smithsonian Contributions, vol. xi.

I may also refer to incidental mention of the same law in a paper by myself on the birds of Cape St. Lucas, in the 'Proceedings of the Philad. Academy' for Nov. 8th 1859, p. 299.

The western division begins at the western border of the eastern, or along the sterile plains of the trans-Mississippi country, and extends across to the Pacific Ocean. The character of the ornithological fauna of this division is much the same through and beyond the Rocky Mountains to the eastern slope of the Sierra Nevada and Cascade Mountains of California and Oregon, but changes somewhat on the western slope and thence to the Pacific, and, although to a considerable extent uniform, yet exhibits some modifications which may warrant a separation into a western and middle division, making three in all, which we may call provinces, of very unequal extent, and exhibiting further modifications or subdivisions with latitude, as I shall proceed to explain, taking into consideration the whole continent north of Mexico.

As previously remarked, the eastern province or division extends from the Atlantic Ocean to about the meridian of 100° west from Greenwich, or 23° west from Washington. The line of division on the Gulf of Mexico starts near the eastern border of Texas, perhaps between the Brazos and the Sabine, and, following up the direction of the former river to the approaches of the Great Desert nearly on the meridian mentioned, proceeds northward, forced sometimes more or less westward, especially along the Platte, sometimes eastward. It crosses the Platte between Forts Kearney and Laramie, and intersects the Missouri between Fort Randall and Fort Pierre, perhaps near Fort Lookout, as it is between the first-mentioned two points that in ascending the river we find the change to take place in the ornithology of the country. Soon after crossing the northern boundary of the United States and to the western side of Lake Winnipeg, the line rapidly inclines westward, especially beyond the Saskatchewan, and extends to the Rocky Mountains, including the valleys of Athabasca and Great Slave Lakes, and both sides of the Mackenzie River, north to the Arctic Ocean, even crossing the Rocky Mountains to the Porcupine River, and into Russian America at least to 145°, or beyond the forks of the Yukon, where Mr. Kennicott found many of the most characteristic summer land birds to be almost identical with those of Slave Lake, Lake Winnipeg, and Northern Canada.

The western province occupies the western slope of the Cascade and Sierra Nevada ranges of mountains in the United States, although its extent southward along the peninsula of Lower California is not well determined. To the north-west it extends at least to the 140th meridian, beyond that probably replaced by a more Arctic fauna. We are not sufficiently familiar with the birds occurring between the northern Rocky Mountains and the coast to tell how far inland in Stickin Territory or even in northern British Columbia the coast fauna extends, perhaps not further than in California or Oregon, although it is possible that, owing to the absence of a continuous longitudinal range of great height, the western and middle regions may there be more thoroughly blended into one.

The middle province, or that of the great plateau, occupies the space between the two just mentioned, probably not passing, in its integrity or as a peculiar province, north of the valley of the Saskatchewan, and is thus wedged in between the two. As already stated, it extends along the eastern slope of the Cascade and Sierra Nevada Mountains, and apparently along the east side of Lower California to Cape St. Lucas; at least the birds of the Cape, as will hereafter be explained, belong much more emphatically to it than to the western province. A break in the mountains opposite San Diego explains the appearance at that point on the coast of a few species like *Tyrannus vociferans, Sialia arctica, Polioptila melanura,* &c., so characteristic of the middle province. The southern boundary of this province during the summer may be considered as occupying the valleys of the Rio Grande and Gila; but along this line it is greatly mixed up with the peculiar fauna of Northern Mexico, which, as far as its summer birds indicate, is almost entitled to be considered as a fourth main province.

The eastern province to the north merges into the Arctic, and southward exhibits a very important subdivision in the hot region of the South Atlantic and Gulf States, which is bounded to the north by the isothermal of 80°, extending, however, up the coast to the Dismal Swamp of Virginia, or even to the James River. To the west it ranges along the isothermal of 83° or 85°, following the line to the N.N.W. along the valleys of the Brazos, Red River, the Washita and the Canadian. Most of the species belonging to this subdivision reach along the valley of the Mississippi to a point far north of their limit on the Atlantic slope, the Swallow-tailed Hawk, Parrakeet, and other characteristic species being well-known visitors to Cairo, St. Louis, and even as far north as Wisconsin. This subdivision of the eastern province experiences a still further modification in the southern part of Florida, in consequence of the proximity of the Bahamas and Cuba, which causes stragglers of the West Indian fauna to enter its limits, especially along the south-eastern keys. Some of these are *Certhiola bahamensis, Progne cryptoleuca*?, *Vireo barbatula, Quiscalus aglæus* (*Q. baritus*, Baird, B. N. A. p. 556), &c. The only really peculiar indigenous land bird in Florida is the Florida Jay (*Cyanocitta floridana*), seldom, if ever, found out of that State. As far as is known, there is no corresponding southern subdivision on the west coast in the western province, although California and Washington Territory have each some peculiar species.

As in the eastern province, so in the middle, there is a subdivision along the southern border inhabited by species belonging more particularly to northern Mexico, and occupying the valleys of the Rio Grande and Gila, extending northward along the Rio Grande and Colorado far into the United States. It is the species of this subdivision that, with those peculiar to Cape St. Lucas, characterize the summer fauna of the latter region. In winter, both there and along the Mexican boundary line, these species are mingled with others coming from the more northern portions of the middle province.

In addition, however, to possessing certain species of the boundary-line fauna, Cape St. Lucas has other peculiarities which entitle it to especial consideration*.

It forms a distinct subdivision of the boundary subprovince even more peculiar in its relations than Florida, where the characteristic species (excepting the Florida Jay) are stragglers of the West Indian type from the Bahamas, while, as shown by the indefatigable researches of Mr. Xantus†, there are at least twenty species found at Cape St. Lucas not known elsewhere.

Very few of the birds of the coast of California, or of the western province, winter at Cape St. Lucas, the species being almost entirely those of the middle province. The new and peculiar species in all cases belong to genera of the middle province, especially of its boundary subdivision ; and no genera are peculiar to it. Furthermore, in no instance do we find species of the *tierra caliente* of Mexico not belonging to the United States, nor of any Mexican genera that do not possess representatives in the United States. The difference between the species of birds of Cape St. Lucas and of Mazatlan is very great, although separated only by the breadth of the Gulf of California.

From all these considerations we are legitimately entitled to claim Lower California, or at least its southern extremity, as belonging to temperate North America, even more positively than Florida itself.

Peculiarities in regard to the size of Cape St. Lucas birds will hereafter be referred to.

There is of course an Arctic province which melts gradually into those great provinces mentioned, and along the mountainous ranges extending far southward, in fact almost into Mexico, as shown by the occurrence in summer at Cantonment

---

* See Baird, Pr. Acad. Nat. Sci., Nov. 8th, 1859.

† See Xantus, Pr. A. N. S., Nov. 1859.

Burgwyn, near lat. 37°, of *Lagopus leucurus, Pinicola canadensis, Curvirostra americana, Hesperiphona vespertina,* &c., while the two last-mentioned species, with *Carpodacus cassini,* are even found in summer on the highlands about Orizaba, as shown by specimens transmitted to the Smithsonian Institution by Dr. Sartorius. Similar intrusions of species belonging to the North Mexican fauna take place up the valleys of the Colorado and the Rio Grande, and of those of the eastern province westward along the Missouri and along the Canadian, &c.; but they do not affect the general plan. Although characteristic of the eastern province, as already stated, the Cat-bird (*Galeoscoptes carolinensis*), Red-eyed Vireo (*V. olivaceous*), and Wild Pigeon (*Ectopistes migratoria*) are found along the northern boundary of the United States to the Cascade Mountains, while specimens of *Dendrœca coronata* have even been taken at Fort Steilacoom on Puget Sound. On the other hand, *Turdus nævius** has been shot on Long Island and in New Jersey, *Helminthophaga celata* in the Atlantic states, and *Zonotrichia gambeli* and *Spizella pallida* are well-known and constant visitors in the region of the Great Slave Lake.

Several species of water-birds that belong to the winter fauna of the Pacific coast resort to the Slave-Lake region and north of it to breed, crossing the Rocky Mountains for the purpose. Among them may be mentioned *Larus californicus* and *brachyrhynchus, Colymbus pacificus, Bernicla nigricans, Anser rossi,* &c. This, however, may be in consequence of their migrations being along a meridian line, or north and south, the meridian of the westernmost point of California and even of Vancouver's Island passing east of the mouth of the Mackenzie River.

In any investigation into the reasons why the eastern province is of so much greater extent than the others, and exhibits such a trend westward in British America as to reach and even cross the Rocky Mountains, we shall be greatly aided by the examination of Prof. Guyot's Wall-Map of North America. On this map the country not exceeding 800 feet in height is coloured green; and this portion is almost exactly coincident with the limits of the eastern province just defined—reaching west of the Mississippi almost to the edge of the fertile plains (the true zoological boundary), passing up the Mississippi *vid* St. Paul to the Winnipeg valley, involving the whole shores of Hudson's Bay, thence in a north-westerly direction, a little south of Slave Lake to the foot of the Rocky Mountains, and north to the Arctic Ocean on both sides of the Mackenzie. Within this vast country are "islands" of more elevated land, the whole Appalachian range, from New Brunswick to Central Georgia and Alabama, the height of land between Hudson's Bay and the St. Lawrence system of waters (nearly parallel with the latter), the plateau of Iowa and Northern Wisconsin, and that east of Slave Lake* &c. being more or less completely encircled by the lower level referred to. The highlands within this region have to a certain extent a peculiar fauna, characterized by the presence of such species, to a considerable degree even in summer, as *Junco hyemalis, Perisoreus canadensis, Chrysomitris pinus, Curvirostra americana* (more rarely *C. leucoptera*), *Pinicola canadensis*, &c., most of which are known to breed in the high mountain-region of Georgia. These highlands do not, however, materially alter the summer distribution of our birds, especially in the interior; and there is no physical obstacle, not even that of temperature, to interrupt or affect their passage by way of Rupert's land to the shores of the Arctic Ocean†.

---

* I am informed by Dr. Cabot that a third specimen has recently (Dec. 1864) been shot near Boston and presented to the Natural History Society. As it has been met with as far east as Fort Franklin, it may not improbably reach our eastern coast in company with some of our eastern species bred in the Mackenzie River valley and returning southward to the Atlantic.

---

* This region, bounded west by Coppermine River, Slave, Athabasca, and Wollaston Lakes, and south by Churchill River, is known as the Barren Grounds of Arctic America, and is a great granitic or azoic region, more or less barren of vegetation, destitute of large trees, and having few inhabitants. It is, however, the especial home of the Musk-Ox, the Barren-Ground or small Reindeer, the Barren-Ground Bear, the Polar Hare, and other species.

† The Appalachian Region towards the north and north-east passes into a well-marked subdivision, called by Prof. Verrill, in his paper on the birds of Norway, Maine, the "Canadian." This he correctly charac-

The southern division of the eastern province is also quite well outlined by Prof. Guyot's limits of the cotton-producing region, although running much further to the north-west in Arkansas and the Indian Territory than there indicated.

The much greater tendency of the southern birds, or those belonging to the cotton-region, to go northward in the Mississippi valley than along the Atlantic slope is explained not only by the ascent there of the isothermal lines, but by the absence of any such obstacle to their journey as is furnished by the Appalachian range.

The great central plateau region of Prof. Guyot's map corresponds quite closely with the middle ornithological province, reaching north to the Saskatchewan and west to the Pacific slope. The close relationship of the western province to the middle is illustrated by the fact that the region of country exceeding 800 feet in height extends quite to the Pacific in most places, leaving only a few narrow borders and perhaps the valley of the San Joaquin and the Tulare Lakes below that level.

---

terizes by the presence of certain species during the breeding-season, replacing certain near allies, in what, with Prof. Agassiz, we may term the Alleghanian subdivision. Some of the characteristic and more or less parallel species of birds in these two subdivisions he considers to be the following:—

Alleghanian.	*Canadian.*
Dendrœca discolor.	Dendrœca striata.
Pipilo erythrophthalmus.	Chrysomitris pinus.
Spizella socialis.	Curvirostra leucoptera.
	Junco hyemalis.
	Perisoreus canadensis.
	Picoides arcticus.
	Tetrao canadensis.

The Canadian subprovince includes, especially the highlands between Hudson Bay and the St. Lawrence waters and across them into Northern Wisconsin, the higher portion of the Adirondack, Green, and White Mountains, Northern Maine, and, according to Prof. Verrill, the coast-region from Mount Desert to the south-eastern part of New Brunswick, including the islands in the Bay of Fundy. Even far to the south the high mountain-regions of the Alleghanies to Georgia have the same fauna, their most characteristic species of bird being the common blue Snow-bird, *Junco hyemalis.*

It is a fact not without its significance that the depressed lowland area of eastern America is characterized by the existence of certain genera of fishes and reptiles not found in its Appalachian "island." Thus we have *Amia, Lepidosteus, Micropterus* (*Grystes*), and various other forms of fishes throughout the Mississippi valley as far north as the Great Lakes, while in the Atlantic slope they do not pass the James or Lower Potomac except as stragglers. The soft-shelled turtles and the great mass of the *Emydidæ* belong to the same low region also, as well as most of the American perennibranchiate *Amphibia, Menopoma* (more rarely *Menobranchus*) alone penetrating into the Appalachian region, while *Siredon* belongs exclusively to the high central plateau, being found from the Missouri plains to the Cascade Mountains of Oregon and south to the city of Mexico.

The *Unionidæ* and *Melaniadæ* seem likewise to belong more especially to the depressed portion of eastern North America.

I may also mention in this same connexion that, as might be expected, the entire eastern province is characterized by its abundance of Chelonians and Amphibians, the middle and western by their Saurians. Among fishes, the Etheostomoids, *Esoces, Siluridæ,* the freshwater Ganoids (*Amia, Lepidosteus,* &c.), the fresh-water Percoids, &c. are peculiar to the eastern province, while the great abundance of unusual forms of the *Cyprinidæ* is equally distinctive of the middle and western. As regards the fishes, however, the boundaries of the provinces are considerably changed, the eastern including all the waters emptying into the Missouri River and Gulf of Mexico, the middle embracing the region of the Great Basin and the drainage of the Colorado River, and the western the waters discharging into the Pacific.

The following table presents the species of birds most characteristic of each province, the selection having been mainly confined to what may be considered as representative species, or those which would formerly have been considered as identical. The isolated species of each province have not been included:—

Western.	*Middle.*	*Eastern.*
Buteo montanus.	— montanus.	— borealis.
— elegans.	— elegans.	— lineatus.
Athene cunicularia.	— hypogæa.	
Picus harrisi.	— harrisi.	— villosus.
— gairdneri.	— gairdneri.	— pubescens.
— nuttalli.	— scalaris.	— borealis ?
Sphyropicus nuchalis.	— nuchalis.	— varius.
Colaptes mexicanus.	— mexicanus.	— auratus.
Trochilus alexandri.		— colubris.
Chætura vauxi.	— vauxi ?	— pelasgia.
Chordediles popetue.	— henryi.	— popetue.
Myiarchus cinerascens.	— cinerascens.	— crinitus.
Contopus richardsoni.	— richardsoni.	— virens.
Empidonax pusillus.	— pusillus.	— trailli ?
— difficilis.	— difficilis ?	— flaviventris.
Turdus nanus.	— nanus.	— pallasi.
— ustulatus.	— ustulatus.	— fuscescens.
Sialia mexicana.	— arctica.	— sialis.
Geothlypis macgillivrayi.	— macgillivrayi.	— philadelphia.
Icteria longicauda.	— longicauda.	— viridis.
Dendrœca auduboni.	— auduboni.	— coronata.
Collyrio excubitoroides.	— excubitoroides.	— ludovicianus.
Vireo swainsoni.	— swainsoni.	— gilvus.
Mimus *var.* caudatus.	— caudatus.	— polyglottus.
Harporhynchus redivivus.	— crissalis.	
	— longirostris.	— rufus.
	— berlandieri.	— ludovicianus.
Thryothorus spilurus.	— leucogaster.	— bewicki.
Troglodytes parkmanni.	— parkmanni.	— aedon.
Sitta aculeata.	— aculeata.	— carolinensis.
Lophophanes inornatus *.	— atricristatus.	— bicolor.
Parus occidentalis.	— septentrionalis.	— atricapillus.
Psaltriparus minimus.	— plumbeus.	
Carpodacus californicus.	— cassini.	— purpureus.
Zonotrichia gambeli.		— leucophrys.
Junco oregonus.	— oregonus.	— hyemalis.
Spizella breweri †.	— pallida.	— pusilla.
Melospiza heermanni.	— fallax.	— melodia.
Peucæa ruficeps.	— cassini.	— æstivalis.
Passerella townsendi.	— schistacea ‡.	— iliaca.
Pipilo oregonus.	— arcticus.	— erythrophthalmus.
— fuscus.	— mesoleucus.	
Agelæus gubernator.	— phœniceus.	— phœniceus.
Sturnella neglecta.	— neglecta.	— magna.
Scolecophagus cyanocephalus.	— cyanocephalus.	— ferrugineus.
Cyanura stelleri.	— macrolophus.	
Cyanocitta californica.	— woodhousii.	— floridana.
	Meleagris mexicana.	— gallopavo.
Callipepla californica.	— gambeli.	
	Ortyx texensis.	— virginianus.

---

* Found also in the middle province.

† Extends also to the Rocky Mountains.

‡ Found also at Fort Tejon ?

Western.	*Middle.*	*Eastern.*
Tetrao obscurus.	— richardsoni.	
	— franklini.	— canadensis.
— sabinii.	— umbelloides.	— umbellus.
Ibis guaruana.	— guaruana.	— ordi*.
Bernicla nigricans.		— brenta.
— leucoparia.	— hutchinsi.	
Querquedula cyanoptera.	— cyanoptera.	— discors.
Pelionetta trowbridgii.		— perspicillata.
Larus occidentalis.		— smithsonianus.
	Chroicocephalus franklini.	— atricilla.
Sterna elegans.		— regia.
Uria columba.		— grylle.

To sum up in brief the conclusions reached in the preceding remarks, it may be stated that the ornithological provinces of North America consist of two great divisions of nearly equal size in the United States, meeting in the vicinity of the 100th meridian, the western half divisible again into two, more closely related to each other than to the eastern, though each has special characters. These three sections form three great provinces, to be known as the western, middle, and eastern :—or those of the Pacific slope; of the great basin, the Rocky Mountains, and the adjacent plains; and of the fertile plains and region generally east of the Missouri. A northern or subarctic fauna mixes with and melts into the three, extending far to the south (even into Mexico) along the Rocky Mountains. The middle and eastern provinces have each a southern subdivision, the one bordering on Mexico, the other on the Gulf and the Atlantic; and each of these also exhibits a differentiation, the former having a special subdivision again into Cape St. Lucas, and the latter into Florida. Northward the eastern province extends more and more westward, reaching the Rocky Mountains and even westward of them towards the Yukon.

The southern boundary of the middle province of North America may be arbitrarily established as a straight line, drawn from the mouth of the Rio Grande to that of the Yaqui near Guaymas on the Gulf of California, thus throwing into North America the whole of Florida and Lower California.

Attention has already been called to the fact that certain species characterizing the eastern province make their appearance in the Rocky Mountains. The following is a list of those collected by Mr. Drexler at Fort Bridger (about in lat. 41°, long. 110°) in the centre of the Rocky Mountain range, nearly all of which have been found still further to the north-west, toward Puget Sound. The birds found at Fort Bridger probably arrived there by way of the Platte, those of Washington Territory by both the Platte and upper Missouri.

---

* Found all the way across to the Pacific.

Although thus extending westward, almost, if not quite, to the Pacific, along the northern boundary they appear to always return the way they went, as none of the species have yet been met with in California.

I have added to each species the locality on the Missouri River up to which it was observed by Dr. Hayden in one of his early explorations.

Species of Eastern birds found at Fort Bridger.

Tyrannus carolinensis.	Fort Union and Yellowstone.
Turdus fuscescens.	
T. swainsoni.	
Siurus noveboracensis.	
Dendrœca coronata[*].	
Setophaga ruticilla.	Fort Pierre.
Vireo olivaceus.	Fort Union (Mr. Audubon).
Mimus carolinensis.	Fort Lookout.
Zonotrichia leucophrys.	(Not found further west).
Quiscalus versicolor.	Fort Benton (Pearsall).

It will be sufficiently evident, as most birds change their residence from winter to summer, and *vice versâ*, that, unless we devote especial attention to their distribution during the breeding-season, we shall not be able to mark their boundaries with precision. Species which go north to the Arctic circle to nest, return to mix, in Mexico, Guatemala, or the West Indies, with species resident in those countries, or of short migration, and are followed part way in their southern flight by Arctic birds starting from localities still further north. The case is quite different with reptiles and most insects and mammals, of which a few species only change their residence or leave their place of birth, not in obedience to the instinct of reproduction, but of necessity caused by overcrowding, the search for suitable food, &c.

---

[*] Found by Dr. Suckley on Puget Sound.

A true parallel, however, is seen in the movements of fishes in search of a suitable place to deposit their spawn, which takes place with the same regularity as to date and direction that we find in birds.

It is only of late years that we have been enabled to determine, even with approximate precision, the winter quarters of our North American birds. Many of the species of the Eastern province are limited by the waters of the Atlantic or Gulf, crowding into Florida, Georgia, and other southern States. Comparatively few visit the West Indies; a much larger proportion reach Mexico and Guatemala; and the number of those passing further south diminishes with the latitude. Very few of the land birds pass into South America, the following being a list of the principal species (and their southernmost mentioned limit) recorded as occurring in that portion of the continent, mostly as winter emigrants, although a few are resident.

Cathartes aura, S. America.
— atratus, S. America.
Falco columbarius, Ecuador.
— femoralis, S. America.
— sparverius, S. America.
Buteo pennsylvanicus, Ecuador.
Asturina nitida, Ecuador.
Nauclerus furcatus, Brazil.
Rostrhamus sociabilis, Ecuador to La Plata.
Coccyzus erythrophthalmus, Bogota.
Turdus swainsoni, Ecuador.
Mniotilta varia, Bogota.
Helminthophaga chrysoptera, Bogota.
Siurus noveboracensis, Bogota.
Dendrœca blackburniæ, Ecuador.
— cærulea, Bogota.
— striata, Bogota.
— æstiva, Bogota.
Myiodioctes canadensis, Ecuador.
Setophaga ruticilla, Ecuador.
Pyranga rubra, Ecuador.
— æstiva, Ecuador.
Dolichonyx oryzivorus, Gallapagos.
Hirundo bicolor, Bolivia.
Vireo olivaceus, Bogota.

The following species are recorded as occurring on the Isthmus of Panama and Darien in addition to most of those just mentioned:—

Antrostomus carolinensis.
Ceryle alcyon.
Tyrannus carolinensis.
— dominicensis.
Myiarchus crinitus.
Empidonax trailli.
— flaviventris.
Dendrœca virens.
— coronata.
— castanea.
— pennsylvanica.
— maculosa.
Myiodioctes mitratus.
Hirundo horreorum.

Hirundo lunifrons.
Turdus fuscescens.
Protonotaria citrea.
Geothlypis philadelphia.
Oporornis formosus.
Helminthophaga peregrina.
Chrysomitris mexicanus.
Euspiza americana.
Guiraca ludoviciana.
Icterus spurius.
— baltimore.
Quiscalus macrurus.

One circumstance will attract our attention in examining these lists of North American birds reaching the Isthmus of Panama or passing beyond it as far as Bogota and into Ecuador—namely, that they embrace absolutely none of the species characterizing the middle province, all belonging to the eastern. It would seem to be the case that the migratory birds of the Rocky Mountain region go only a comparatively short distance southward into Mexico, few of them even reaching Guatemala, but preponderating on the west coast. It has already been remarked that the birds strictly characteristic of the Pacific region of the United States scarcely appear to go into Mexico at all.

While the number of land-birds reaching the gates of South America, and passing through them, principally along the Andes into central New Granada and Ecuador, is so small, the case is very different with the waders, a large proportion of which are during our winter spread over the entire continent, almost as far as Patagonia. Comparatively few, however, of the Natatores follow them in this journey.

The following list comprises the principal indications of the winter visitors to the West Indies from the United States, all of them, excepting *Nephocœtes niger*, belonging to the eastern fauna.

	Bahamas.	Cuba.	Jamaica.	Other Islands.
Cathartes aura	*	*	* ?	
—— atratus	..	*	*	
Falco anatum	*	*	*	
—— columbarius	..	*	*	Tobago.
Buteo borealis	..	*	*	
—— pennsylvanicus	..	*		
Rostrhamus sociabilis	..	*		
Circus hudsonius	..	*		

	Bahamas.	Cuba.	Jamaica.	Other Islands.
Pandion carolinensis	*	*	*	Trinidad.
Nauclerus furcatus	..	*	*	
Brachyotus cassini	..	*	..	Tobago ?
Otus wilsonianus				
Coccyzus (*uncertain*)				
Sphyropicus varius	*	*	*	St. Croix.
Trochilus colubris	..	*		
Nephocœtes niger	..	*	*	
Antrostomus carolinensis	..	*		
Chordediles popetue	*	*	*	
Ceryle alcyon	*	*	*	St. Croix, Tobago.
Tyrannus carolinensis	..	*		
—— dominicensis	*	*	*	St. Croix, St. Thomas.
Myiarchus crinitus	..	*	* ?	
Contopus virens	..	* ?		
Empidonax acadicus	..	*		
Turdus mustelinus	..	*		
—— fuscescens	..	*		
—— swainsoni	..	*		
—— aliciæ	..	*		
—— migratorius	..	*		
Sialia sialis	..	*		
Mniotilta varia	*	*	*	St. Croix.
Parula americana	*	*	*	St. Thomas.
Geothlypis trichas	*	*	*	
Oporornis formosus	..	*		
Helmintherus vermivorus	..	*	*	
Protonotaria citrea	..	*		
Helminthophaga bachmanni	..	*		
—— chrysoptera	..	*		
—— peregrina	..	*		
Siurus aurocapillus	..	*	*	St. Domingo, St. Croix.
—— noveboracensis	..	*	*	St. Croix.
—— ludovicianus	..	*	*	
Dendrœca virens	..	*		
—— canadensis	*	*	*	
—— coronata	*	*	*	St. Domingo.
—— blackburniæ	*			
—— pennsylvanica	*			
—— striata	*	*		
—— maculosa	*	*		
—— tigrina	*	*	*	St. Croix.
—— palmarum	*	*	*	St. Domingo.
—— superciliosa	..	*	*	St. Domingo.
—— discolor	*	*	*	St. Croix.
—— cærulea	..	*		
Myiodioctes mitratus	..	*		
Setophaga ruticilla	*	*	*	St. Domingo, St. Croix.
Pyranga rubra	..	*	*	
—— æstiva	..	*	* ?	
Hirundo horreorum	..	*	..	St. Croix.
—— bicolor	..	*		
Cotyle riparia	..	*	*	

	Bahamas.	Cuba.	Jamaica.	Other Islands.
Ampelis cedrorum	..	*	*	
Vireo olivaceus	..	* ?		
—— barbatula	*	*		
—— noveboracensis	..	*		
—— solitarius	..	*		
—— flavifrons	..	*		
Galeoscoptes carolinensis	..	*		
Polioptila cærulea	..	*		
Certhiola bahamensis	*			
Passerculus savanna	..	*		
Coturniculus passerinus	..	*	* ?	
Spizella socialis	..	*		
Guiraca ludoviciana	..	*		
—— cærulea	..	*		
Cyanospiza cyanea	..	*		
—— ciris	..	*		
Dolichonyx oryzivorus	*	*	*	
Agelæus phœniceus	*			
Xanthocephalus icterocephalus	..	* !		
Icterus cucullatus	..	*		
—— baltimore	..	*		
—— spurius				
Columba leucocephala	*	*	*	St. Croix, Porto Rico.
Ectopistes migratoria	..	*		
Zenaidura carolinensis	..	*		
Melopelia leucoptera	..	*	*	
Chamæpelia passerina	*	*	*	

From an examination of this list it will be seen that, with but few exceptions, the species that reach Panama and pass into South America occur also in Cuba as winter visitors, the principal exceptions being *Empidonax trailli* and *E. flaviventris*, *Geothlypis philadelphia*, *Dendrœca castanea* and *D. æstiva*, *Myiodioctes canadensis*, *Euspiza americana*, and one or two species belonging to the middle province. It will also be remarked how many more of our species are recorded as visiting Cuba than Jamaica, 80 species instead of 36, the number becoming still less as we proceed eastward in the group. The Bahama winter fauna will probably exhibit as many continental species as Cuba, or even more, when we are better acquainted with it. The comparative superiority of numbers in Cuba is probably owing to the fact that the island, the western end especially, with the Tortugas, is a stepping-stone or resting-place for our species passing from Florida to Yucatan and Guatemala. This is probably the route by which most species of the Eastern province reach Middle America, rather than along the coast of Texas and Mexico, many species being recorded in Guatemala and Honduras, not noted in Mexico north of Yucatan. It is the species of the Middle province that characterize more especially the winter fauna of Central Mexico, particularly its western slope and Cape St. Lucas; and it is an interesting fact that very few of the birds peculiar to the Western province are known to occur in Mexico at all. The North American winter birds of Western Mexico, as stated, belong almost entirely to the Middle fauna, the most notable exceptions being the occurrence at Colima and Manzanillo of *Dendrœca superciliosa, Sterna antillarum,* and *Chroicocephalus atricilla,* and at Mazatlan of *D. superciliosa, Mniotilta varia,* and *Siurus aurocapillus,* none of them being found in California. The birds of Eastern Mexico are likewise in large proportion from the Eastern province of North America.

It may perhaps be proper to recall attention to the fact that, in defining the southern boundary of the Middle province and at the same time that of North America as a zoological region, I drew the line from the mouth of the Rio Grande of Texas to that of the Yaqui River at Guaymas on the Gulf of California. The space embraced between this line and the continental portion of South America, including Mexico, Central America, the Isthmus of Panama and of Darien, and the entire West Indies, I term Middle America; all south of this, South America. Trinidad alone, of the West Indies, belongs rather to South America, most of its species being common to the adjacent mainland, though some are, perhaps, peculiar to it. Tobago, further north, though with some South American species, has yet a considerable number peculiar to itself.

In concluding this part of my remarks, I may state that the present lists and generalizations in regard to the distribution of our birds are to be considered merely provisional, and that investigations at present in progress by myself and others will, it is hoped, impart much greater precision to the knowledge of the subject. In many instances I have omitted species which might have been considered entitled to a place in one or the other table; but this has been in most cases the result of recent determinations and different identifications from those of other authors.

Having thus briefly indicated the boundaries of the principal provinces of the North American ornithological fauna, I propose to call attention to some generalizations that have suggested themselves in reference to certain influences exerted upon species by their distribution according to latitude, longitude, and elevation, and by their association with each other. The most important of these is the law that North American birds of wide distribution in latitude, whether migrant or residents, will be found to be larger the higher the latitude of their place of birth.

It is well known to zoologists, that of all animals, birds are most constant in their dimensions—so much so, indeed, that size is generally considered a most important specific character. The comparison of many specimens of the same species from widely remote localities has shown me, however, that there is a certain variation in size, dependent on the extension northward and southward of the limits of distribution during the breeding-season, the more northern being the larger, the more southern the smaller. Nor does this depend upon a greater development of body by more constant use of the muscular system in flight, as suggested by Gloger, who observed the same fact in Europe (but confined especially to the increase in length of wings and tail), or upon a greater variety or amount of food, since the difference is as strongly marked in species constantly resident, as in those which migrate over great distances; and the development extends to the bill, feet, and all parts of the body. And, in fact, birds most remarkable for their great range show the least variation in size, while the variation is most evident in certain species of Woodpeckers, as *Picus villosus* and *Hylotomus pileatus*, which have a very wide distribution in latitude, without any special migration at all. In these Woodpeckers the difference between specimens from Florida and from Canada is so great as to have given rise to the impression of there being several species of each, differing in size.

In nearly every instance where I have compared summer specimens from localities widely remote in latitude, I have found the difference referred to. A similar law prevails in regard to mammals, as shown very clearly in the American Deer, *Cervus virginianus,* and in the Grey Squirrel, *Sciurus carolinensis,* which are much larger in the north than in the south, and larger in the mountains than in the lowlands. In mammals, if not in birds, a second law comes into play—that in the same latitudes in North America the specimens from the greater altitudes are the larger,—this law appearing to extend even to man, as shown by the greater size of the inhabitants of the Appalachian region, than of those of the lowlands.

If we assume the parallel of 40° as an average line, while the specimens born further north are larger, those born in the most southern localities are even disproportionately smaller. This is very evident in species from Cape St. Lucas, the extreme southern limit of the Middle province, where, almost without exception, the indigenous birds are so much smaller than specimens of the same species inhabiting the United States as readily to convey the impression of being distinct new species. The same is the case, although to a less degree, in Florida, where there appears to be a tendency (found to some extent also at Cape St. Lucas) to absolute increase of the size of the bill, even with diminution in general bulk, seen especially in *Corvus americanus,* and *Ortyx virginianus**.

While some Florida birds are thus characterized by larger bills than their more northern brethren, several of the birds of the Middle and Western provinces have an increase in the length of the tail as compared with the same or allied species in the east. Thus *Icteria longicauda* of the Western and Middle provinces is only to be distinguished from *I. viridis* of the Eastern, by the longer tail, while *Mimus polyglottus,* and *Harporhynchus rufus* have each a long-tailed Western variety.

Both these generalizations in regard to varieties of size and proportion have been used with advantage in testing the claim of supposed species to this rank, and have aided in materially diminishing the accepted number of species of both mammals and birds.

---

* This disproportionate difference of size at Cape St. Lucas and South Florida is probably connected with the limited range of the species in those regions, which have thus an insular rather than continental relationship.

Another fact which may be mentioned in reference to birds of the different provinces is, that specimens from the Pacific coast are apt to be darker in colour than those from the interior, the latter frequently exhibiting a bleached or weather-beaten appearance, possibly the result of greater exposure to the elements and less protection by dense forests.

In a careful study of large series of birds of any two representative species collected near the line of junction of their respective provinces, a combination of characters of both species will often be met with, explicable only on the supposition of the hybridization of the two. Whether such hybrids are themselves fertile, or whether the cross is kept up by the constantly recurring union of individuals of pure breed of either species, I am not prepared to say; but the general facts appear to be as stated. A notable instance of this is seen in the two northern species of *Colaptes,* one, *C. mexicanus,* characterizing the Western and Middle provinces, the other, *C. auratus,* the Eastern. The lines of distribution of the two intersect on the upper Missouri near the mouth of the Yellowstone River; and all along that portion of its course we find *Colaptes* of every possible grade of transition, or combination of the several characters of the two species, scarcely any two exactly alike, and the same individual not even agreeing in the markings of opposite sides*. A similar combination of characters of *Cyanura stelleri,* and *C. macrolopha* is met with on the headwaters of the Columbia, and on the Yukon, of *Junco hyemalis* and *J. oregonus,* and of *Helminthophaga celata,* and *H. peregrina.* Other instances can be adduced; but these will be sufficient to illustrate the facts.

The possibility of hybridity as referred to, is another element to be taken into consideration in discussing the claim of a supposed new species to that rank.

Having thus discussed the laws of distribution and migration of the birds of North America on the continent itself, and the influence of region upon the development of the individual, I proceed to consider the subject of their movement eastward toward Greenland and Europe, that of European birds toward North America, and the several causes that appear to influence such migrations, and to present various tables of geographical distribution bearing upon the question introduced.

---

* See Baird, 'Birds of North America,' 1858, p. 122.

A comparison of the carefully prepared lists of Greenland birds by Reinhardt in 'The Ibis' for 1861, and of Iceland birds by Newton, published in 'Iceland, its Scenes and Sagas,' by Sabine Baring-Gould, in 1863, will show that all the land-birds mentioned as abundant in Iceland are, with few exceptions, more or less common in Greenland; and it is therefore very probable that the additions to the lists of the European birds found in Greenland are to be looked for among the remainder of the Icelandic species. The following list, compiled from the above sources, of all land-birds of Iceland and of the European species occurring in Greenland, will illustrate the relationship in this respect:—

European Land-Birds found in Iceland and Greenland.

	Iceland.	Greenland.	North America.
Haliaetus albicilla (*Linn.*)	Common.	Very common.	? Very rare.
Falco candicans *, *Gmel.*	Rather rare.	Common.	Quite common.
—— islandicus, *Gmel.*	Very common.	Rare.	Rare.
—— peregrinus, *L.*	Problematical.	Not common.	Very rare.
—— æsalon, *L.*	Very common.		
Nyctea nivea (*Daud.*)	Rather rare.	Very common.	Very common.
Otus brachyotus	Rare.	Very rare.	,, ,,
—— vulgaris	One specimen.		
Chelidon urbica (*Linn.*)	Rare.		
Hirundo rustica, *L.*	,,		
Troglodytes borealis, *Fischer*	,,		
Turdus merula, *L.*	Seen twice.		
—— iliacus, *L.*	Common.	Two specimens killed.	
—— pilaris, *L.*	Doubtful.		
Ruticilla tithys (*Scop.*)	Seen once.		
Saxicola œnanthe (*Linn.*)	Common.	Common.	Rare.
Motacilla alba, *L.*	,,	Two specimens.	
Anthus pratensis	,,	One specimen.	
Plectrophanes lapponica, *L.*	Very rare.	Common.	Very common.
—— nivalis, *L.*	Very common.	Very common.	,, ,,
Ægiothus linaria, *L.*	Rare.	Common.	Common.
—— canescens, *Gould*	....	,,	
Sturnus vulgaris, *L.*	Rare.	One specimen.	
Corvus corax, *L.*	Common.	?	
—— cornix, *L.*	Rare.		
Lagopus islandorum, *Faber*	Common.	Common.	Common.

---

* [Printed "canadensis" in the original, but an obvious mistake.—ED.]

From an examination of the above list it will be seen that the only land-bird abundant in Iceland, and not noticed in Greenland, is *Falco æsalon*. The European species to be looked for in Greenland as occurring in Iceland are only the *F. æsalon, Chelidon urbica, Hirundo rustica, Troglodytes borealis, Turdus merula, Ruticilla tithys, Corvus corax*?, and *Corvus cornix*. It will also be noticed that all the European land-birds common in Greenland have also been found in continental North America*. The Ptarmigans of the three regions will quite probably be found identical.

The following is a table of the water-birds of Greenland and Iceland belonging to the European fauna,—from which it will be seen that two species, *Crex pratensis* and *Ortygometra porzana*, are found in Greenland, and are not yet recorded from Iceland; eleven or twelve species in Iceland and not in Greenland; one in Newfoundland, *Scolopax rusticola*, and neither in Greenland or in Iceland; eleven in both Greenland and Iceland (there are in Greenland proportionally fewer water-birds than land-birds of the European fauna that occur in continental North America).

	Iceland.	Greenland.	North America.
Vanellus cristatus (*Meyer*)	Occasional.	Two specimens.	
Charadrius hiaticula, *L.*	Not rare.	Not rare.	
—— pluvialis, *L.*	Very common.		
Hæmatopus ostralegus, *L.*	Common.	Three specimens.	
Ardea cinerea, *L.*	Occasional.	Two specimens.	
Falcinellus igneus	Very rare.		
Numenius phæopus (*L.*)	Very common.	Not rare.	
—— arcuatus (*L.*)	Rare.		
Philomachus pugnax (*L.*)	One specimen.	......	Several specimens.
Limosa ægocephala (*L.*)	Common.	One specimen.	
Gallinago media, *Leach*	,,	Common.	Bermuda.
Scolopax rusticola, *L.*	......	......	Newfoundland.
Fulica atra, *L.*	Rare.		
Crex pratensis, *Bechst.*	......	Very rare.	Occasional.
Ortygometra porzana (*L.*)	......	,,	
Rallus aquaticus, *L.*	Rare.		

---

* *Haliaetus albicilla* was noticed by Sclater as found in Newfoundland and Nova Scotia, although now he considers the evidence rather uncertain. The Smithsonian Institution possesses specimens of true *Falco peregrinus* as distinguished from *F. anatum* from Moose Factory, Hudson's Bay.

(Table *continued*).

	Iceland.	Greenland.	North America.
Bernicla leucopsis (*Temm.*)	Common.	Common ?	Doubtful.
Anser ferus (*L.*)	Rare.		
—— segetum, *Bechst.*	Rare.		
—— brachyrhynchus, *Baill.*	Rare.		
Cygnus ferus, *Leach*	Common.	Not rare.	
Nettion crecca (*L.*)	Very common.	Common.	Not rare.
Mareca penelope (*L.*)	Quite common.	Not rare.	,,
Querquedula querquedula (*L.*)	Problematical.		
Fuligula ferina (*L.*)	One specimen.		
Œdemia nigra (*L.*)	Rare.		
Larus canus (*L.*)	Very rare.		

The following list embraces the strictly North American birds which are recorded by Reinhardt as occurring in Greenland:—

Falco candicans.
Hirundo horreorum.
Cistothorus palustris.
Regulus calendula.
Dendrœca coronata.
—— virens.
—— striata.
Parula americana.
Helminthophaga ruficapilla.
Geothlypis philadelphia.
Anthus ludovicianus (*breeds*).
Turdus minor*.
Tyrannula pusilla†.
Contopus borealis.
Vireo olivaceus.
Xanthocephalus icterocephalus.
Zonotrichia leucophrys‡.
Loxia leucoptera.
Eremophila cornuta ?
Sphyropicus varius.
Colaptes auratus.
Charadrius virginicus.
Numenius hudsonicus.
—— borealis.
Actodromas maculata.
Gambetta flavipes.
Macrorhamphus griseus.
Porzana carolina.
Fulica americana.
Nettion carolinensis.
Bucephala albeola.
Pelionetta perspicillata.
Podiceps holbœlli.
Rhodostethia rosea.
Xema sabinii.

While therefore it appears that Iceland in all probability furnishes a considerable number of species of European birds to Greenland, the latter supplies very few American birds in return. This is owing to the fact that Iceland lies east of the south-western extremity of Greenland, and in part south of its eastern coast, so that the visitors from the continent of North

---

* It is difficult to say which of the three allied species of North American Thrush is meant here.

† This species is also indeterminable.

‡ Quite as likely to be *Z. gambeli.*

America in their northward or north-eastern movement and corresponding return would not come near Iceland at all; while on the other hand, a migration to the north and north-west from Iceland would necessarily soon strike Greenland at a distance of only a few hundred miles, especially aided by the prevalent aerial currents, of which mention will be made hereafter. The following are the only peculiarly North American or Greenland species noted in Mr. Newton's list:—*Falco candicans,* Gmel., *Numenius hudsonicus,* Lath., *Histrionicus torquatus,* Bon.

It is difficult to say whether the Iceland Golden-eye (*Clangula islandica*) is a gift from Iceland to Greenland and North America, or *vice versâ.* While abundant in Iceland, it is by no means rare in North America, being in some years quite common as far south as the St. Croix River.

The British island of Heligoland in the North Sea, off the coast of Denmark, is of special interest in an ornithological point of view, from its furnishing more species of European birds than any other locality of its extent (400 out of about 500 species admitted by Blasius), as well as several Asiatic and North American species not recorded as having occurred elsewhere in Europe. To the labours of Herr Gätke, a resident of the island, extended over more than twenty years, we are indebted for the curious and remarkable facts referred to (Naumannia, 1858, p. 419). The North American birds observed by him are:—

Anthus ludovicianus.	Nov. 6, 1851.
Dendrœca virens.	Oct. 19, 1858.
Harporhynchus rufus.	Oct. —, 1857.
Galeoscoptes carolinensis.	Oct. 28, 1840.
Charadrius virginicus.	Dec. 20, 1847.
Tryngites rufescens.	May 9, 1847.
Pelionetta perspicillata.	Oct. 9, 1851.
Xema sabinii.	Oct. 25, 1847.
Rhodostethia rosea.	Feb. 5, 1858.

The following North American birds are recorded in Prof. Blasius's 'List of the Birds of Europe,' 1862 (edited by Newton), in the British Museum Catalogue of British Birds, and in other authorities, as occurring in Europe:—

Falco candicans.
Nauclerus furcatus. (England.)
Nyctale acadica. „
Scops asio. „
Colaptes auratus. „
Picus villosus. „
—— pubescens. „
Coccyzus americanus. „
—— erythrophthalmus. (Lucca.)
Ceryle alcyon. (Ireland)
Progne purpurea. (England.)
Hirundo bicolor. „
Dendrœca virens. (Heligoland.)
Harporhynchus rufus. „
Galeoscoptes carolinensis. „
? Lanius excubitoroides. (England.)
Turdus pallasi. (Germany.)
—— swainsoni. (Belgium; Italy.)
—— migratorius. (Germany.)
Anthus ludovicianus. (Heligoland.)
Vireo olivaceus[*]. (Chillaston, near Derby, England, May, 1859.)
Regulus calendula. (England.)
Ampelis cedrorum. „
Loxia americana.
—— leucoptera. „
? Ægiothus canescens. (Belgium.)
Spiza ciris. (England; cage-bird ?)
Agelæus phœniceus[†]. (England.)
Sturnella magna. (England; March and October.)
Ectopistes migratoria. (England.)
Charadrius virginicus. (Heligoland.)
—— vociferus. (England.)
Gambetta flavipes. „
Symphemia semipalmata. (Sweden.)
Actiturus bartramius. (Germany; England.)
Tringoides macularius. (England; Germany.)
Tryngites rufescens. (England; Heligoland.)
Macrorhamphus griseus. (England.)
Actodromas maculata. „
—— minutilla. „
—— bonapartii. (England; France.)
Numenius hudsonicus. (Iceland.)
—— borealis. (Scotland.)
Porphyrio martinica. (England.)
Porzana carolina. (England: Newbury, October 1864: Zoologist, p. 9540.)
Botaurus lentiginosus. (England.)
Nycticorax violaceus. „
Anser hyperboreus. (Germany.)
Bernicla canadensis. (England.)
Querquedula discors. (Northern France.)
Mareca americana. (England.)
Cygnus americanus. „
Fulix affinis. „
—— collaris. „
Bucephala albeola. „
Pelionetta perspicillata. (Heligoland.)
Lophodytes cucullatus. (England.)
Plotus anhinga. „
Tachypetes aquilus. (Weser.)
Sterna fuliginosa. (England; Magdeburg.)
Anous stolida. (England; France.)
Rhodostethia rosea. (Heligoland; England.)
Xema sabinii. (Heligoland; England.)
Chroicocephalus atricilla. (England.)
—— philadelphia. (Ireland.)
Oceanites oceanica. (England.)
Puffinus fuliginosus. (France; England.)
—— obscurus. (England.)
Podiceps holbœlli. (Holland.)

---

[*] Ibis, 1864, p. 394.

[†] Ibis, 1861, p. 177.

Of the sixty-nine species of the above list, all but nineteen occurred in Great Britain and Iceland.

List of Birds supposed to be identical in Europe and North America, or not satisfactorily separated.

Archibuteo lagopus.
Aquila chrysaetus.
Pandion haliaetus.
Brachyotus vulgaris.
Nyctea nivea.
Surnia ulula.
Cotyle riparia.
Ampelis garrulus.
? Pinicola enucleator.
Ægiothus linaria.
Plectrophanes lapponicus.
—— nivalis.
? Corvus corax.
? Lagopus albus.
? —— mutus.
Squatarola helvetica.
Strepsilas interpres.
Phalaropus hyperboreus.
—— fulicarius.
Tringa canutus.
—— maritima.
—— subarquata.
Calidris arenaria.
Bernicla brenta.
Anas boschas.
Dafila acuta.
Spatula clypeata.
Chaulelasmus streperus.
Fulix marila.
Histrionicus torquatus.
Bucephala clangula.
—— islandica.
Harelda glacialis.
Polysticta stelleri.
Somateria mollissima ?
—— spectabilis ?
Mergus serrator.
Sula bassana.
Graculus carbo.
Stercorarius (*all species*).
Larus glaucus.
—— leucopterus.
—— marinus.
Rissa tridactyla.
Pagophila eburnea.
Rhodostethia rosea.
Sterna anglica.
—— caspia.
—— hirundo.
—— macrura.
—— paradisea.
Hydrochelidon fissipes.
Colymbus torquatus.
—— septentrionalis.
Podiceps cristatus.

I have omitted the strictly Pelagic or ocean-wandering birds and those belonging to both coasts of the North Atlantic.

No North American birds have yet been found in Spitsbergen; indeed there are there but about twenty-six species in all, according to Malmgren. The only land-birds recorded are *Falco gyrfalco, Nyctea nivea, Plectrophanes nivalis,* and *Lagopus,* var. *hyperboreus.* Of the birds of Jan Mayen's Land, which lies in a direct line between Iceland and Spitzbergen, and nearer to

Greenland than to either, I have seen no catalogue; but they probably have some relationship to Greenland species.

Bermuda*, in lat. 32° 15′ and long. 64° 51′, is about 700 miles off the coast of Carolinas, Cape Hatteras being the nearest land. It is nearly on the same parallel with Charleston, and about 900 miles south of Nova Scotia, nearly midway between the latter and the Virgin Islands of the West Indies. The entire group to which it belongs is about fourteen miles in length by about three or four in width. There are no indigenous vertebrates, with the exception of a lizard (*Plestiodon longirostris*, Cope, Proc. Acad. Philad. 1861, p. 315); and the birds are entirely North American in character, much like those of the middle United States. The fauna is especially characterized by the existence throughout the year, and the breeding, of the following birds:—*Vireo noveboracensis, Galeoscoptes carolinensis, Sialia sialis, Cardinalis virginianus, Corvus americanus* (said to have been introduced), *Chamæpelia passerina*, ?*Gallinula galeata*.

In addition to these, the following species are supposed to breed occasionally in the islands:—*Sphyropicus tyrannus, Ardea herodias*.

All the other species appear to be accidental visitors, noted for a day or two one year, and not seen again, perhaps, for several. By far the greater number make their appearance in autumn only, very few occurring in spring.

There are no West-Indian birds, properly so called, in the Bermudas; and the occurrence of *Milvulus tyrannus*, a South American species, is very questionable.

A few species of European birds have been noted in the Bermudas, consisting of *Saxicola œnanthe, Alauda arvensis*, and *Gallinago media*.

It will be noticed that the first and the last of these have been found in Greenland, the *Saxicola* on the continent only.

As out of the line of migration of our land birds, it is not likely that there are any regular visitors to the Bermudas, *en route* for other regions, the great majority of the species detected there having, in all probability, in most cases been driven out of their course by storms. They certainly do not all stop *en route* to the West Indies, as many of the species are not found in the latter islands.

---

* See "Ornithology of the Bermudas," in Jardine's 'Contributions to Ornithology,' 1849 and 1850, and 'The Naturalist in Bermuda,' by J. M. Jones. London: 1859.

The water-birds seem to appear more regularly, owing to the fact that many of the species apparently take their flight southward from Nova Scotia and Newfoundland straight for the West Indies, and pass directly over the Bermudas.

In the following list of the birds recorded as occurring in the Bermudas, it will be seen that the greater portion of the insectivorous birds and many of the *Raptores* occur also in the West Indies; rather more than half of the number visit the latter group.

*List of Birds recorded as occurring in the Bermudas**.

Cathartes aura (W). No. of specimens 1, December.
Falco anatum (W). Two; January, February.
—— columbarius (W). Through the year, especially in September.
—— sparverius. One; December.
Circus hudsonicus (W). Occasional in autumn.
Haliaetus leucocephalus. Seen.
Pandion carolinensis (W). Abundant.
Otus wilsonianus (W). Three.
Syrnium nebulosum. One; April.
Nyctale acadica. One; January.
Nyctea nivea. Three; autumn.
Coccyzus americanus. "Thousands," October 1849; a few in April.
Sphyropicus varius (W). Perhaps breeds; December to April.
Trochilus colubris (W). At one time common; April.
Chætura pelasgia. Several; September 1849.
Chordiles popetue (W). Sometimes very common; April to September 1864.
Ceryle alcyon (W). Common; September to April; regular visitor.
Milvulus tyrannus?? One; March 1847.
Tyrannus carolinensis (W). Abundant; April.
—— dominicensis (W). March and April.
Contopus virens (W). One; April.
Turdus mustelinus (W). Several.
—— swainsoni (W). Two; October.
—— migratorius (W). Several; February and March.

---

* Species with (W) are found also in the West Indies.

Saxicola œnanthe. One each—October, March.
Sialia sialis (W). Common; resident.
Anthus ludovicianus. One; November.
Mniotilta varia (W). Three; October.
Parula americana (W). One; April.
Geothlypis trichas (W). One; October.
Seiurus noveboracensis (W). Abundant in autumn; regular visitor.
Dendrœca coronata (W). One; January; several in April.
—— pinus. Common in September; several seasons.
—— palmarum (W). Two; December.
—— discolor (W). One; October.
Myiodioctes mitratus (W). One; March.
Pyranga rubra (W). Several; April.
—— æstiva (W). Several; April.
Hirundo horreorum (W). Rare in spring; common August to September; great flight in September 1849.
—— bicolor (W). September 1849.
Cotyle riparia (W). August and September.
Progne purpurea. Great flight September 22, 1849.
Ampelis cedrorum (W). Abundant October to December.
Collyrio borealis. One; March.
Vireo noveboracensis (W). Common; resident.
Mimus carolinensis (W). Common; resident.
Eremophila cornuta. Three; October and February.
(Alauda arvensis.) One; June 12.
Chrysomitris tristis. Several; March.
Curvirostra americana. January to May.
—— leucoptera. March to May.
Plectrophanes nivalis. January to February.
Passerculus savana (W). One; April.
Poœcetes gramineus. One; October 25.
Coturniculus henslowi. Small flock; December.
Melospiza palustris. One; December.
Guiraca ludoviciana (W). Two; October and April.
Cardinalis virginianus. Common; resident.
Dolichonyx oryzivorus (W). Nearly every autumn; October.
Icterus baltimore (W). Two; October.
Corvus americanus. A few every year; perhaps breeds.
Zenaidura carolinensis (W). One; March 1850.
Chamæpelia passerina (W). Common; resident.

Also most of the waders and a considerable number of the swimming-birds.

Conclusion.—From a careful consideration of the facts mentioned in the preceding pages, we are, I think, entitled to derive the following generalizations in regard to the interchange of birds between America and Europe.

European birds, especially the land-species, reach Greenland and return to the continent by way of Iceland, the Færoe Islands forming a stepping-stone from Great Britain and Scandinavia. In very rare instances species seem to proceed direct to Greenland, without stopping in Iceland, although this may be due to the fact that, while visiting Iceland, they have not yet been noted there by any naturalist.

The European birds found on the continent of North America reach it by autumnal movement from Greenland in company with strictly North American species.

Birds of North America rarely, if ever, reach England from Greenland by direct spontaneous migration by way of Iceland, as shown by the fact that only three of the American birds occurring in Greenland are found in Iceland, and that few of the American species observed in Europe are found in Greenland at all.

Most specimens of American birds recorded as found in Europe were taken in England (about fifty out of sixty-nine), some of them in Heligoland, very few on the continent (land-birds in only five instances).

In nearly all cases these specimens belonged to species abundant during summer in New England and the eastern provinces of British America.

In a great majority of cases the occurrence of American birds in England, Heligoland, and the Bermudas has been in the autumnal months.

The clue to these peculiarities attending the interchange of species of the two continents will be found in the study of the laws of the winds of the northern hemisphere, as developed by Prof. Henry and Prof. Coffin. These gentlemen have shown (see Prof. Henry's articles on "Meteorology," 'Report of Commissioner of Patents for 1856,' p. 489) that "the resultant motion of the surface atmosphere, between latitudes 32° and 58° in North America, is from the west, the belt being twenty degrees wide, and its greatest intensity in the latitude of 45°. This, however, must oscillate north and south at different seasons of the year with the varying declination of the sun. South of this belt, in Georgia, Louisiana, &c., the country is influenced, at certain seasons of the year, by the north-east trade winds, and north of the same belt by the polar winds, which, on account of the rotation of the earth, tend to take a direction toward the west. It must be recollected that the westerly direction of the belt here spoken of is principally the resultant of the south-westerly and north-westerly winds alternately predominating during the year."

From these considerations and facts, therefore, we are entitled to conclude that the transfer of American birds to Europe, is principally, if not entirely, by the agency of the winds, in seizing them during the period of their migration (the autumnal especially), when they follow the coast, or cross its curves, often at a considerable distance from land, or a great height above it. Carried off, away out to sea, mainly from about the latitude of 45° (the line of greatest intensity of the winds) the first land they can make is that of England, whence the fact that most of the species have occurred in the British Islands as well as Heligoland, equally well fitted to attract stragglers and furnish them a resting-place. It is probable that, apart from their few permanent residents, the Bermudas are supplied in the same manner.

Iceland being in the latitude of the reverse current, from east to west, such of its species as are caught up by the winds and carried off would soon reach Greenland, only a few hundred miles distant. This may be the principal agency of supply from Europe to Greenland, as most European land-birds are only met with there at rare intervals, although, as Greenland lies north of Iceland, there may be a regular migration to some extent.

As remarked, the prevailing direction of the winds, whether violent or moderate, throughout the year, as well as during the period in which our birds are on either their spring or autumnal migration, is from America toward Europe. Even should their direction be reversed and that rare phenomenon, a summer "north-easter," occur, it would merely have the effect of bringing the birds back upon our coast, or into the interior, the line of the storm being in fact about parallel with the eastern shore-line of the United States, and its influence extending only a short distance from the coast, and not involving the vicinity of Europe at all. That such storms do affect the movements of our birds is shown in the case of the Golden Plover. It is well known that this species breeds in immense numbers in the northern regions of America, and that the southward migration in summer and autumn, is principally confined to the region along or near the Atlantic coast. Generally, large flights would seem to start directly from Newfoundland and Nova Scotia for the West Indies, where they are met with every autumn passing still southward into South America, and reaching almost to Patagonia. Usually it is but a comparatively small number that touch and rest along the Atlantic states; but it is well known to the sportsmen of New England that, should a violent north-east storm occur off the coast toward the end of August, unusual flights of Plover and Curlew may be looked for*. This was the case in 1863, when the islands of Nantucket, Martha's Vineyard, and other localities along the coast of Massachusetts, swarmed with incredible flights of these birds. On similar occasions immense numbers have been carried far into the interior of the Atlantic states, furnishing the occasion of a regular carnival for gunners, much as in the case of great flights of the Wild Pigeon.

Another instance of the influence of north-east storms is in the occurrence of the Stormy Petrel (Mother Carey's Chickens), and other oceanic birds far in the interior, and even across the Alleghanies, during and after such storms. The collections of the Smithsonian Institution embrace specimens of *Thalassidroma leachi* killed about Washington in August, 1842, with hundreds of others. I myself obtained at Harrisburgh, Penn., a fine adult Pomerine Jager, *Catarhactes pomarinus*, killed on the Susquehanna, near that city, in September 1839. Adults of the species mentioned are rarely seen within the limits of the United States at all; and in summer the latter would hardly be likely to occur south of Newfoundland.

---

* Mr. G. N. Lawrence mentions (Ann. Lyceum N. Y. viii. 1864, p. 100) that the Golden Plover is always found at Montauk Point on the 28th of August, should a north-east storm occur.

The present is not the occasion to discuss the nature of that impulse which causes the bird or the fish to retrace its steps in spring so unerringly; the fact is a well-established one and of much importance in reference to the multiplication or diminution of species. A region deprived of its spring birds or fishes by extermination will only be filled up again in the course of a long period of time. The result, however, can be greatly accelerated by artificial propagation in the places to be supplied.

It may be considered as established that the migrations of birds are generally more or less in a north and south direction, influenced very materially by river-courses, mountain-chains, forests, conditions of moisture, mean temperature, altitude, &c. Middendorff ('Die Isepiptesen Russlands') suggests that birds migrate in the direction of the magnetic pole,—a suggestion not at all borne out by the facts in North America.

It may be further remarked that, while birds proceed generally in the spring to the very spot of birth, and by a definite route, their return in autumn is not necessarily in the same line. Many birds are familiar visitors in abundance, in certain localities, in either spring or autumn, and are not known there in the other season. This is a fact well known to the diligent collector; and I have been inclined to think that, in very many instances, birds proceed northward along the valley of the Mississippi, to return along the coast of the Atlantic.

In general the northward, vernal movement is performed much more rapidly, and with fewer stops by the way, than the autumnal.

Birds generally make their appearance in given localities with wonderful regularity in the spring, the *Sylvicolidæ* especially, a difference of a few days in successive years attracting the notice of the careful observer; this difference is generally influenced by the season. The time of autumnal return is, perhaps, less definite.

[The foregoing is the paper spoken of by us on a former occasion (Ibis, 1866, p. 416), and of which an extract in the 'Annals and Magazine of Natural History' for last year is the only portion that has appeared in England. Our contemporary the 'Journal für Ornithologie' has very properly thought the entire paper worthy of translation; and we now present it to our readers in full confidence that they will appreciate its high value.—Ed.]

XVII.—*The Ornithology of Ceylon.—A Supplement to* Dr. Jerdon's *'Birds of India.'* By EDWARD BLYTH, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc.

MY object in drawing up this paper, containing an enumeration of the Cinghalese species, which do not find admission to Dr. Jerdon's 'Birds of India,' is to supply what I conceive to be a desideratum to students of ornithology alike in Southern India and in Ceylon,—to the former lest they should be led to describe any of them that they might meet with as new species, and to the latter in order to complete their information respecting the birds inhabiting the island, so far as at present known, in addition to the species which they will find described by Dr. Jerdon. My friend Mr. Layard has not left much for his successors to glean in the low country; but I believe that many species have yet to be discovered in the mountain-region, as also in the southernmost hill-districts of India, and that many more species will be found to be common to the two ranges of territory than we are at present aware of. In the class of Mammalia, I found a Ceylon example of *Felis rubiginosa* in the Belfast Museum, and one of *Sciurus layardi*, from South Malabar, in the Worcester Museum; and I have seen three specimens of *Sciurus macrurus*, the common large Squirrel of the lower elevations of Ceylon, from the Nilgiris and other mountains of Southern India. My late friend Dr. Kelaart was no sportsman or gunner, and ornithology was a very subordinate branch of his researches into the natural history of the island; but his residence at Newera Elia led to the discovery of several conspicuous species; and it cannot be supposed but that many more remain to reward the investigations of an energetic ornithologist in that vicinity alone. I supply brief descriptions wherever necessary, as those already published are inaccessible to the generality of ornithological students.

1. PALÆORNIS CALTHRAPÆ, Blyth; J. A. S. B. xviii. p. 800, 1849; Layard, Ann. & Mag. N. H. 1854, xiii. p. 263; Hartlaub, Journ. f. Orn. 1854, p. 158; *P. gironieri*, Verreaux, Rev. Zool.

1853, p. 195; *Psittacus viridicollis,* Cassin, Proc. Acad. Philad. 1853, p. 373, Journ. Acad. Phil. iii. p.156.

The common hill Parrakeet of the island.

2. LORICULUS EDWARDSI, nobis.

Edw. B. pl. 6; *L. asiaticus,* Layard, Ann. & Mag. N. H. 1854, xiii. p. 261; Kelaart, Prodr. Faun. Zeyl. 1852, p. 127 (*nec* Latham, 1790); *L. indicus,* G. R. Gray, List B. M. *Psittacidæ* (1859), p. 55; Schl., Mus. P.-B. *Psittaci* (1864), p. 132 (*nec* Gmel. 1788).

This race is wholly peculiar to Ceylon, and therefore is neither the *Psittacus indicus* of Gmelin, nor *P. asiaticus* of Latham; nor do any of the other synonyms cited by Mr. Gray (*ut suprà*) properly apply to it. Perhaps, therefore, the best name for it would be *Loriculus edwardsi,* as above given in reference to the figure of it by Edwards. It differs from *L. vernalis* in having the crown deep red, passing to a saffron hue on the nape, and in some specimens over much of the back; while the fore part of the neck is tinged more or less deeply with verditer. This is little more than a race of *L. vernalis,* which is confined to Ceylon; whereas *L. vernalis* is so very widely diffused over India and Indo-China (and, if I mistake not, the Andamans), being replaced in the Malayan peninsula by *L. galgulus.* In Java, the *L. pusillus,* G. R. Gray (*P. vernalis,* of Kuhl and Swainson, not of Sparrman), is nearly allied to *L. vernalis,* but is smaller, and is tinged with yellow instead of verditer in front of the neck. It appears to be confined to Java, where it replaces *L. galgulus* of the Malayan peninsula, Sumatra, and Borneo. "Kandy, Putlam, Caltura, Galle, Hambantotte, and Gillymalle are the various localities," remarks Mr. Layard, "where I have most plentifully procured this pretty little parrakeet."

3. ATHENE CASTANEONOTUS, Blyth, Cat. Mus. Calc. p. 39, J. A. S. B. 1851, xix. p. 511; *A. castanopterus,* Blyth, J. A. S. B. xv. p. 280.

Accepted by Prof. Schlegel as distinct from *A. castanoptera* of Java. Entire mantle and wings deep chestnut-rufous, more or less obscurely barred with subdued dusky; primaries light dusky, faintly barred with rufous on the inner web, and with a series of spots of bright rufous on the outer web; tail dusky, with eight or nine narrow white or whitish bars, the last of them terminal; head and neck closely barred with bright rufescent on a dusky ground, and contrasting strongly with the rufous of the back; breast nearly similar, but the colours deeper; the abdomen white, with longitudinal dusky streaks; and the vent and lower tail-coverts pure white; bill pale yellow; irides red brown. Length of wing about 5 inches. "Its hoot is not unlike the cry of the cuckoo, though more shrill and abrupt; indeed when I first heard it one morning, I thought it was the note of our annual visitor the European cuckoo. It hoots as late as 9 or 10 o'clock in the morning in shady situations; is silent during the heat and glare of the day, but begins again at 4 or 5 P.M. It is most on the alert during moonlight nights, feeding on coleoptera and geckoids, securing the latter while creeping up the bark of trees, seizing them in its claws. * * * it sees very clearly by day, being even then most difficult to approach" (Layard, Ann. & Mag. N. H. 1853, xii. pp. 105, 106).

4. TOCKUS GINGALENSIS (Lath.); *Buceros gingalensis*, Layard, *partim*, Ann. & Mag. N. H. 1854, xiii. p. 260.

Occurs in the southern province, about the base of the hills.

Obs.—Mr. Layard also indicates a second species of *Hydrocissa*, besides *H. coronata*, as existing in the mountains of the island (*tom. cit.* p. 261).

5. MEGALÆMA ZEYLANICA (Gmel.); *M. caniceps*, Cassin, Ornith. Rep. U. S. Exped. Japan, &c. p. 242; Brown, Illustr. pl. 15.

This is hardly more than a small dark-coloured race of the Indian *M. caniceps*, being rather smaller, with the head, neck, and breast much browner, the pale central streaks being much reduced, and the light specks at the extremity of the wing-coverts being also reduced, and perhaps fewer in number. Length of wing 4·25 in., tail 2·75 in., bill at front 1·25 in. Common and universally distributed. Mr. Layard gives an interesting account of a captive individual, which evinced a remarkable predatory propensity (Ann. & Mag. N. H. 1854, xiii.

p. 446). Barbets are birds which might easily enough be brought alive to Europe, fed upon preserved fruits during the voyage, or they might be induced to feed on sugared boiled rice or potatoes *.

6. CYANOPS FLAVIFRONS (Cuvier); Levaill. pl. 55; *Bucco aurifrons*, Temminck.

This bird is exactly intermediate in its coloration between the *Megalæma* and *Cyanops* subgroups. It is confined to the hilly zone, where it predominates over the other island species.

7. XANTHOLÆMA RUBRICAPILLA (Gmel.); Brown, Illustr. pl. 14.

"Very common about Colombo; I have also seen it from Batticaloa, and procured it at Jaffna. It frequents the banian trees in great numbers, and feeds upon the ripe fruits, swallowing them entire" (Layard, Ann. & Mag. N. H. 1854, xiii. p. 448).

8. CHRYSOCOLAPTES STRICKLANDI (Layard), Ann. & Mag. N. H. 1854, xiii. p. 449; *Indopicus carlotta*, Malherbe, Monogr. Picid. t. 67; *Brachypternus ceylonus*, Kelaart, Prodr. Faun. Zeyl. p. 128; Jerdon, Ill. Ind. Orn. pl. 47.

Like *C. delesserti*, but wholly crimson above, with a whitish bill. Length about 11 inches, wing $5\frac{1}{4}$ in., bill 1·75 in. Belongs chiefly to the mountain-country.

9. BRACHYPTERNUS CEYLONUS (Forster); *Picus erythronotus*, Vieillot; *P. neglectus*, Wagler; *P. sonnerati*, Lesson.

This bears just the same relationship to *B. aurantius* (also inhabiting Ceylon) that *Chrysocolaptes stricklandi* does to *C. delesserti*, being wholly crimson above, but with a black rump (as in other *Brachypterni*). It is very common in the low country.

MICROPTERNUS GULARIS (Jerdon)?; *M. phaioceps*, Layard, Ann. & Mag. N. H. 1854, xiii. p. 450.

---

* There is now a healthy example of *Cyanops asiaticus* in the Zoological Gardens, probably a female bird, as it has never uttered the frequent loud note of its species. It was in nestling plumage when it arrived, and has attained its mature dress in captivity.

I wrote to Mr. Layard (as he quotes), "Your Woodpecker might make a fourth race of *Micropternus*, on the principle that *M. gularis* is separable from *M. phaioceps*." The difference from the South Indian *M. gularis*, however, is very slight; and this is a Woodpecker that falls elsewhere into several local races, *M. badiosus* (Temm.) of Borneo, being somewhat better distinguished than the rest. "Decidedly a rare species in the island, and almost confined to the south" (Layard, Ann. & Mag. N. H. 1854, xiii. p. 450).

10. PHŒNICOPHÆUS PYRRHOCEPHALUS (Gmel.); *Cuculus pyrrhocephalus*, Penn., Ind. Zool. pl. 5; Levaill., Ois. d'Afr. pl. 224; *P. leucogaster*, Duméril.

"Inhabits the densest jungles, never descending to the ground, but living amid the highest branches. It is unknown in the northern districts; in fact, its range seems limited to the mountain zone; and even there it is very local. * * * In life the feathers round the eye resemble the finest crimson velvet" (Layard, *tom. cit.* p. 453).

11. CENTROPUS CHLORORHYNCHUS, Blyth, J. A. S. B. xviii. p. 805.

Distinguished from *C. rufipennis* by its much larger bill of a uniform greenish-yellow colour, by the darker shade, bordering on maroon, of its back and wings, and by the peculiar hue of the dark head, neck, and under parts, which have a somewhat ruddy tinge, and are glossed with amethystine-purple, a redder shine of which is seen likewise to gloss the upper parts; tail purple-black. Length about 18 in., of which the tail measures half, its outermost feathers 9·5 in. less; wing 6·5 in.; bill to gape 1·75 in., and its vertical depth fully ·5 in.; tarsi 2 in., and long hind claw about 1 inch. Irides red. A rather local species in the upland territory.

CORVUS SPLENDENS, var.

This Crow is melanoid in Ceylon, but not quite so melanous as the Indo-Chinese race (in Pegu, Tenasserim provinces, and Siam). (*Cf.* Layard, Ann. & Mag. N. H. 1854, xiii. p. 214.)

12. CISSA ORNATA (Wagler); "*C. pyrrhocyanea*, Licht.,"

Gould, B. As. pt. i. pl.; *C. puella,* Blyth & Layard, Ann. & Mag. N. H. 1854, xiii. p. 213.

"Nothing can exceed the beauty of this bird when in full plumage, and with the cere of the eye and legs still fresh; the contrast between the blue of the former and the crimson of the latter being very striking. It has a loud harsh note, not unlike that of the European jay" (Layard, *ut suprà*). Mr. Paul (as quoted by Mr. Gould) remarks—"This bird frequents the hilly districts clothed with dense forests of large jungle, at an elevation of 1500 feet above the sea-level, is seldom seen in the plains, and gives utterance to a loud noise when flying." "Very common at Newera Ellia. They frequent the fields there, generally in small flocks, in search of worms" (Kelaart, *op. cit.* p. 104).

13. EULABES PTILOGENYS (Blyth), J. A. S. B. xv. p. 285.

This species has no bare skin on the cheek; but the occipital lappets are well developed, and the basal half of the lower mandible is black. Length of wing 6 inches. Colouring as in the two Indian species, the smaller of which (that of the peninsula of India) is also an inhabitant of Ceylon. The present one is the "Hill-Maina" of Anglo-Indians in the island, and chiefly inhabits the mountain-forests. Mr. Layard gives an account of its habits (Ann. & Mag. N. H. 1854, xiii. p. 216).

ACRIDOTHERES TRISTIS (Linn.), var.

Ceylon specimens are always darker in colouring than those of India generally.

14. TEMENUCHUS ALBOFRONTATUS (Layard), Ann. & Mag. N. H. 1854, xiii. p. 217.

A very distinct species. "General colour of back, tail and wings black, with a green gloss. Forehead albescent; hinder feathers of crest brownish black, with albescent shafts. General colour of breast, throat, vent, and under tail-coverts albescent, the shafts of the feathers on the throat shining white. Specimens are in the British Museum" (Layard, *ut suprà*).

15. MUNIA KELAARTI, Blyth, MS.

Described as the supposed adult of *M. pectoralis* (ibid. xx.

p. 178). Brown above, with pale stems to the feathers, nearly obsolete on the back, and passing to blackish on the forehead, wings, rump, and tail; throat and fore-neck, with the cheeks, deep brown-black; the small upper tail-coverts variegated with white, and the greater are largely tipped with fulvous; under parts variegated; the breast brown, and belly and lower tail-coverts black, the last having white medial streaks, and the rest of the under parts white subterminal bands, and the flank-feathers a second, and some of them a third, white cross band in addition. Bill livid bluish; and feet dark plumbeous. Wing 2·12 in. "Confined to the hilly zone. Dr. Kelaart found it at Nuwera Elia, and I procured it at Gillymalle" (Layard, Ann. & Mag. N. H. 1854, xiii. p. 258).

16. GARRULAX CINEREIFRONS, Kelaart, Blyth, J. A. S. B. xx. p. 176.

Akin to *G. delesserti* of the Nilgiris, but differing much in its colouring. General hue a rich brown above, much paler below; forehead and cheeks pale ashy; chin and borders of the outer primaries albescent; bill blackish; legs dusky-corneous. Length 8·5 in.; wing 4·5 in.; tail 4 in., its outermost feather 1·12 in. shorter; bill to gape 1·25 in.; tarsi 1·25 in. A hill species. "I obtained several specimens along the banks of the Calloo Ganga, about forty miles inland from Caltura, and one at Pallabaddoola, close to the source of the river in the Peak range" (Layard, Ann. & Mag. N. H. 1853, xii. p. 270).

17. MALACOCERCUS STRIATUS, Swainson, Zool. Ill. 2nd ser. pl. 127; *M. griseus*, Cassin, Orn. Report U. S. Exped. Japan &c. p. 240 (*nec* Gmelin)!

This very closely resembles *M. terricolor*, but has the tertiaries and tail much more distinctly marked with cross striæ seen at all angles of reflection, and the under parts are more deeply tinged with rufous. One of the commonest birds of Ceylon, with the same habits and probably the same harsh note as *M. terricolor*,—the note of *M. griseus* (the common species at Madras) being notably different, and much less harsh.

18. LAYARDIA RUFESCENS (Blyth), J. A. S. B. xvi. p. 453.

Colour deep brown above, with no admixture of grey except on the crown and bordering the primaries; flanks, abdomen, and lower tail-coverts much the same, but the throat and breast vinaceous-brown. Bill, orbital skin, and feet bright orange-yellow. Irides white. Length about 10 inches; wing 4 inches; tail 5 in., its outermost feathers 1·75 in. less; bill to gape 1 inch; tarsi 1·37 in. "Confined to the southern and midland districts, in thick jungle only. In habits it resembles the preceding species" (Layard, *tom. cit.* p. 271).

19. POMATORHINUS MELANURUS, Blyth, J.A.S.B. xvi. p. 451.

Resembles *P. horsfieldi* of Southern India, but seems always to have a shorter bill, and the colours are more brought out; the hue of the upper parts is more rufescent, the tail much blacker; and the cap is suffused with blackish mingled with rufescent, but contrasting with the rufescent hue of the rest of the upper parts. The black of the tail affords the readiest distinction. "A few miles from Colombo, on the road to Kandy, in the low, scrubby and almost impenetrable brushwood, growing on the chenas which had fallen out of cultivation, I found these birds in abundance, in small parties of six or eight, their singular churring cry resounding in all directions. I also found it in the Balcadua Pass, and Dr. Kelaart at Nuwera Elia" (Layard, *tom. cit.* p. 271).

20. PELLORNEUM FUSCOCAPILLUM (Blyth), J. A. S. B. xviii. p. 815.

Upper parts uniform greyish olive-brown, the primaries with paler margins, and the extreme tips of the tail-feathers rufescent; supercilia, lores, ear-coverts, sides of neck, throat, and entire under parts pale ferruginous-brown, a little deeper on the breast; coronal feathers dark brown, margined with dusky-black, and pale-shafted. Bill pale, the upper mandible dusky, and feet paler. Length about 6·25 in., wing 2·8 in., tail 2·5 in., bill to gape ·8 inch, and tarsi 1 inch. "But two specimens fell under my notice. One I killed with a blowpipe, in my garden in Colombo, the other I shot in the Central road. The birds crept about bushes and shrubs like *Dumetia albogularis*" (Layard, *tom. cit.* p. 269).

21. ALCIPPE NIGRIFRONS, Blyth, J. A. S. B. xviii. p. 815.

Closely akin to *A. atriceps* of Southern India, from which it differs in not having the whole crown black, but only the forehead, continued as a line backward over each eye and the ear-coverts. The tail also is darkly and distinctly rayed with dusky-black. General hue fulvous-brown above, and on the flanks and lower tail-coverts; rest of the under parts pure white, the axillaries tinged with rufescent. Irides pale straw-coloured. Length of wing 2·25 in. The young are similar in plumage to the adult. Widely distributed in Ceylon. "It frequents low impenetrable thickets, and its curious note often betrays its propinquity, when itself is closely hid" (Layard, *tom. cit.* p. 269). The nest is "built in a low thorn bush, and composed of grasses woven together in a dome, with the entrance near the top; eggs white, slightly freckled with pink spots" (*Idem,* Ann. & Mag. N. H. 1853, xi. p. 397).

22. DRYMŒCA VALIDA, Blyth, J. A. S. B. xx. p. 180; *D. robusta,* Bl., *ibid.* xviii. p. 812.

Differs from *D. sylvatica* of the Nilgiris in its darker shade of colour above, and larger and stronger bill and legs, which last appear to have been of a deep reddish-brown colour; the flanks and sides of the breast are rather dusky. Irides light red-brown. "It frequents tufts of grass and low bushes in dry situations. It is rather a rare bird, and feeds on small insects of all kinds, which it seeks amid the bushes. It generally hunts in small parties, and traverses the branches up and down in a similar manner to *Orthotomus longicauda*" (Layard, Ann. & Mag. N. H. 1853, xii. p. 263).

23. CISTICOLA HOMALURA, Blyth, J. A. S. B. xx. p. 176.

Differs from *C. schœnicola* in having a stouter bill, the whole upper parts much darker, and the tail almost even, except that its outermost feathers are ·25 in. shorter than the next. The prevailing hue of the upper parts is dusky-black, with much narrower rufescent lateral margins than in *C. schœnicola,* the rump, however, being unmixed rufescent as in that species, and the neck much tinged with the same. One specimen has some dark markings on the breast; and another in first plumage greatly resembles the adults. It is found "abundantly in the fields of *gingelle* (*Sesamum orientale*) at Pt. Pedro" (Layard, *tom. cit.* p. 262). Dr. Kelaart states (*op. cit.* p. 100) that it is "found in great abundance at Horton plains and Newera-Elia, where they build their nests among the long patna grasses and reeds." I suspect that this requires some further confirmation as a species distinct from *C. schœnicola,* or, if really different, that the two have been much confounded one with the other.

ACROCEPHALUS DUMETORUM, Blyth (var.).

Cinghalese specimens have a faint greenish shade, but do not otherwise differ from Indian examples.

24. BRACHYPTERYX (?) PALLISERI, Kelaart; Blyth, J. A. S. B. xx. p. 178.

A presumed female is of a rich dark olive or somewhat tawny-brown above, paler below, and whitish along the middle of the abdomen; flanks and lower tail-coverts dark; and a strong rufous tinge on the chin and throat. Bill dusky above, whitish beneath. Feet brown. Length about 6·5 in., wing 2·5 in., tail 2·75 in., bill to gape ·8 in., and tarsi 1 inch. The 5th, 6th, and 7th primaries equal and longest, the first 1 inch shorter; and the outermost tail-feathers 1·37 in. shorter than the middle ones. Procured by Dr. Kelaart in the mountain-district of the island.

25. OREOCINCLA SPILOPTERA, Blyth, J. A. S. B. xvi. 142.

Colour uniform rich olive-brown above, inclining to tawny; below white, with black spots nearly resembling those of the Missel-Thrush; middle of throat, lower abdomen, vent, and lower tail-coverts spotless; wing-coverts black, margined more or less with the hue of the back, and each conspicuously tipped with a pale whitish spot. Bill blackish and very robust; the tarsi brown and slender. Length about 8·5 in., wing 4 inches, tail 3·25 in., bill to gape above 1 inch, and tarsi 1·25 in. "Only found in the hilly zone, affecting high trees" (Layard, *tom. cit.* p. 270).

26. Merula kinnisi, Kelaart, Blyth, J. A. S. B. xx. p. 177.

Male jet-black, with orange-coloured legs, bill, and orbital skin. Female above ashy-black, below rather paler; bill and feet bright yellow. Length about 9 in., wing 4·5 in., tail 4 in., bill to gape 1·82 in., and tarsi 1·82 in. First short primary 1·25 in. shorter, and second ·5 in. shorter than the fourth. The last character distinguishes this species readily from *M. simillima* of Southern India. The wings are even more rounded than in *M. vulgaris*; and the species would seem to approximate to *Turdus xanthosceles*, Jardine (Contr. Orn. 1848, pl. 1), from Tobago. It is the Blackbird of Newera Elia, with notes and habits said to resemble those of *M. vulgaris**.

Copsychus saularis (Linn.); *C. ceylonensis*, Sclater, P. Z. S. 1861, p. 186.

Females are much darker or more nigrescent on the back than Indian or Burman specimens; but there is no further difference.

27. Rubigula melanictera (Gm.), Walden, Ibis, 1866, p. 323; *Ægithina atricapilla*, Vieill.; Lévaill., Ois. d'Afr. pl. 140; *Sylvia nigricapilla*, Drapiez; *Rubigula aberrans*, Blyth; *Meropixus atricapillus*, Bonap.

Common in the southern and central provinces.

Lanius lucionensis, Scopoli (?); *L. superciliosus*, Layard, Ann. & Mag. N. H. 1854, xiii. p. 130†.

This is one of the races into which *L. cristatus*, L., seems to be divided, being distinguished by its prevalent dull ashy-brown hue, and its somewhat stronger and deeper bill. It inhabits or visits China and the Philippines; and specimens have been received from the Andaman Islands. Mr. Layard (*ut suprà*) describes the Ceylon bird as "being simply paler and wanting the rufous crown of the Indian bird. It is exceedingly abundant in all open lands dotted with small bushes. I saw them in greater numbers about Hambantotte than in any other part of Ceylon; they frequented low bushes."

---

* There is a black *Merula* in the Samoan Islands, *Turdus vanikorensis*, Quoy and Gaimard, Voy. Astrolabe, *Aves*, pl. vii. f. 2 (Cassin, Orn. U. S. Expl. Exped. p. 158).

† *Sed vide antèa*, p. 213.

28. Tephrodornis affinis, Blyth, J. A. S. B. xvi. p. 473.

Merely differs from *T. ponticerianus* in being greyer and in wanting the conspicuous whitish supercilia. Irides greenish-yellow. "Not uncommon about Jaffna, Colombo, and Kandy; affecting wooded grass-lands. It is migratory, and appears in October" (Layard, *tom. cit.* p. 131). A migration probably confined within the limits of the island, from the mountains to the plains.

29. Edolius paradiseus, var., Blyth, J. A. S. B. xxviii. p. 273.

The closed wing of a Ceylon specimen measures only 5·75 in.; the frontal crest is little larger than in some Pinang specimens, the feathers straightening to ·62 in.; and the bill measures only ·75 in. from nostril to tip, instead of ·87 in., in the Pinang specimens, and commonly one inch in the comparatively long-crested *Bhimráj* of Bengal and Burma.

30. Dicrurus edoliiformis, Blyth, J. A. S. B. xv. p. 297.

This much resembles the ordinary subcrested *Edolius* of the Malayan Peninsula, except that its tail is formed as in *D. macrocercus,* the caudal feathers being, however, somewhat broader. The form of the bill and the plumage are *Edolius*-like. Length of wing 5·37 in., of middle tail-feathers 5 inches, the outermost 1·5 to 1·75 in. longer, bill to gape 1·37 in, and tarsi 1 inch. "Not uncommon in the Ambegamoa range of hills, at about 2000 ft. elevation; habits as in the other *Dicruri,* but they seem to keep entirely to the jungle" (Layard). Seemingly allied to *D. cristatus,* Vieillot (Gal. des Ois. pl. 141), from Madagascar.

31. Dicrurus minor, Blyth, Ann. & Mag. N. H. 1854, xiii. p. 129; *D. macrocercus,* var., Blyth, J. A. S. B. xviii. p. 815.

Like *D. macrocercus,* but constantly smaller, adults having the wing but 5 to 5·25 in. (instead of 6 inches), and the rest in proportion. "Common about the jungle in the neighbourhood of Colombo" (Layard).

32. Dicrurus leucopygialis, Blyth, J. A. S. B. xv. p. 298.

Like *D. cærulescens,* but smaller; the tip of the upper mandible (it would seem constantly) more produced, and the white confined to the lower tail-coverts, the abdominal region being merely somewhat paler than the breast. Length of wing 5·37 inches. "Common about Colombo" (Layard).

33. Hirundo hyperythra, Layard; Blyth, J. A. S. B. xviii. p. 814.

Resembles *H. erythropygia,* but has the entire under parts (together with the ear-coverts) of the same deep ferruginous hue as the rump, which is deeper than that of *H. erythropygia*; the mesial streaks of the feathers of the lower parts are also less developed. It is permanently resident in the mountainous parts of the island. (*Cf.* Layard, Ann. & Mag. N. H. 1853, xii. p. 170.)

34. Prionochilus (?) pipra (Lesson), Cent. Zool. pl. 26.

Upper parts brownish-ashy; the wings and tail brown, with a russet tinge; throat and front of the neck rust-coloured; the rest of the lower parts brown, rayed (the feathers tipped in the figure) with whitish; vent and lower tail-coverts russet; axillary tufts brilliant violet; bill and tarsi black, the lower mandible whitish beneath. Length about 4 inches, the closed wing 2·25 in. Procured by Dr. Reynard in Trincomali. I have not seen this bird, nor was it known to Mr. Layard.

35. Palumbus torringtoni, Kelaart, Prodr. Faun. Zeyl. p. 107; *P. elphinstoni,* var., Blyth, J. A. S. B. xx. p. 178.

This differs from *P. elphinstoni* of South India in having the back and wings plain dark slaty, without a trace of ruddy margining to the feathers; the head, neck, and under parts are also tinged with vinaceous more than with green; and the reddish-purple gloss (especially about the lower part of the neck behind, where it contrasts abruptly with the ashy of the back) is considerably more brilliant. Sexes nearly alike. It is altogether a handsomer bird than that of Malabar, from which Strickland thought it sufficiently distinct. A mountain species, with the habits of other Cushats. "Their nests are formed on lofty trees. I have seen a nest with only one egg, as large as that of a domestic Pigeon. The stomach contained fruits" (Kelaart).

MACROPYGIA MACRURA (Gmelin); Pl. Enl. 329.

Tail more than half of the entire length. Upper parts cinnamon-coloured; throat white; breast vinaceous-red; rest of lower parts reddish-white; tail-feathers tipped with white. This little-known species is stated by Bonaparte to inhabit Ceylon, and not Senegal (Consp. Av. 1857, ii. p. 57); it has not been observed by British naturalists in the island, and its occurence there is much in need of confirmation. No *Macropygia* is known on the mainland of India, save *M. tusalia* in the South-eastern Himálaya; but *M. ruficeps*, Temm., has been received from Mergui; and *M. rufipennis*, nobis, is a fine species from the Nicobar Islands (akin to *M. phasianella* of Australia and New Guinea). The *Cissa ornata* of Ceylon is, however, similarly isolated, having geographically no nearer representative than *C. venatoria* of the South-eastern Himálaya and Indo-China.

36. GALLUS STANLEYI, Gray; Hardwicke, Ill. Ind. Zool. pl. 43, fig. 2; *G. lineatus*, Blyth, J. A. S. B. xvi. pp. 221, 387; *G. lafayettii*, Lesson, Tr. d'Orn. p. 491; O. des Murs, Icon. Orn. pl. 18.

The Jungle-fowl of Ceylon is more nearly akin to the widely diffused *G. ferrugineus* than to *G. sonnerati* of the Indian Peninsula; but the hen resembles that of the latter, from which it is conspicuously distinguished by the broad, barred markings of the secondaries, which again approximate it to the hen of *G. varius* of Java. The cock has a yellow comb with a red edge, and the cheeks and wattles (as I remember them in the living bird) are chiefly yellow; which, again, is an approximation to *G. varius*. Legs buff-yellow. The comb is less deeply cut than in the wild *G. ferrugineus*, its edge being less minutely crenellated than in *G. sonnerati*; whereas the comb of *G. varius* has its margin plain or entire. The three wild species with hackled nuchal plumes have the single comb and two distinct lateral wattles of most domestic poultry, the *E. javanicus* having no lateral wattles; but the gular skin is developed as in a Guan (*Penelope*), and as is likewise seen in one extraordinary breed of domestic silky fowls in China, which, moreover, has also an entire or uncut comb, and some blue colour on the cheeks! But this curious domestic race has the hackled ruff of all domestic poultry, and not the broad-feathered (*Thaumalia*-like) ruff of *G. varius*[*]. "The Jungle-fowl," writes Mr. E. L. Layard, "is abundant in all the uncultivated portions of Ceylon, but particularly so in the northern and north-western provinces" (*Cf.* Ann. & Mag. N. H. 1853, xi. p. 232, and 1854, xiv. p. 62). With regard to the speckled eggs of this species, I may remark that I have several times obtained very much speckled eggs of domestic fowls in Bengal, and have noticed them to occur commonly in the Chinese Shanghai breed, which are very like feather-legged Dorkings, and have the same anomalous second hind-toe. Mr. Layard observes, "The young, when just hatched, resemble young chickens," as do also those of other Jungle-fowl. This I mention because in certain domestic fowls which are widely diffused over the hot parts of Asia (and not otherwise remarkable) the chickens are naked, or nearly so, till almost half-grown. Some of these were doubtless introduced into the Spanish colonies of South America probably from the Philippines, and succeeded better than the previous stock, which I take to be the true explanation of the assumed phenomenon cited as a supposed proof of climatal influence in Prichard's work on Man. The wild Jungle-fowl are inhabitants of *hot* countries, and are clad with down when hatched, like all other wild *Gallinaceæ*.

37. GALLOPERDIX BICALCARATA, Forster, Ind. Zool. (1781) p. 25; *Tetrao zeylonensis,* Gmel. S. N. (1788), p. 759; *Galloperdix zeylonensis,* Gould, B. As. part vi. pl.

This is the finest of the three species, all of which are figured in successive plates by Mr. Gould. It is known to Europeans, writes Mr. Layard, under the various denominations of "Spurfowl," "Double-spurred Partridge," and "Kandy Partridge," being an inhabitant of the central, southern, and south-western provinces. "The wretched figure of a 'Rail,'" he continues, "in Brown's 'Illustrations,' is, I am certain, meant for a female of this species. Mr. Strickland agreed with me in thus thinking." He adds many details of habits (Ann. & Mag. N. H. 1854, xiv. pp. 105, 106).

---

[*] A cock bred from a Chinese silky fowl of this race and an ordinary domestic hen had the feathers but slightly silky, and an ordinary incised red comb and wattles, like the *common* breed of silky fowls. My late friend Mr. Frith received the parent cock here noticed from China, as "a strange kind of Eagle;" and, curiously enough, Strickland sent me a description of an anomalous kind of Eagle in China, which I was able at once to identify as the particular race of domestic silky fowl in question.

38. TURNIX PUGNAX, var.

It appears that there are two varieties in Ceylon,—one abundant throughout the flat northern half of the island, which agrees with that of India generally; the other with a more deeply cinnamon-coloured abdominal region, which is as common in the south, and perhaps may be met with in the mountainous parts of South India.

39. GORSACHIUS MELANOLOPHUS (Raffles), Tr. Linn. Soc. xiii. p. 326 (juv.); *Ardea goisagi*, Temm. (*Vide anteà*, p. 173, note.)

A Bittern-like bird, with the short neck and also the toes of a *Nycticorax*. This very widely distributed species has not yet been recorded from the mainland of India; but a specimen was obtained in the island of Ramri (Arakan), and it is not uncommon in Malayana and the Philippine Islands. Mr. Layard "procured two or three specimens of this curious bird about Colombo in the month of November 1852. The natives were quite ignorant of it, and while I had one alive in my house came in great numbers to see it. Its eyes were oblong, the pupil surrounded by a light yellow iris, darkening into a greenish yellow on the outside [*qu.* denoting immaturity?]. The cere of the bill greenish, legs and back dark green, claws yellow" (Ann. & Mag. N. H. 1854, xiv. p. 114). Its manners and attitudes, as described by Mr. Layard, were quite those of any species of *Botaurus* or *Ardetta*, squatting and puffing out the plumage, with bill pointed upward ready for a sudden strike.

40. TRINGA ALBESCENS, Temm., was noticed by Mr. Swinhoe in the Colombo Museum (Ibis, 1864, p. 420).

41. PORZANA ZEYLANICA (Gmelin); Blyth, J. A. S. B. xxi. p. 353.

A Ceylon specimen is described by Dr. Jerdon (B. Ind. iii. p. 725), and the Orissa race (*P. amauroptera*, nobis) indicated. "These birds arrive in the south of Ceylon in great numbers in the months of October and November, coming in with the first northerly wind which blows (whence their Dutch name) ["*Nordewind*"]. They drop exhausted, as if from a long flight, in the streets and houses, and conceal themselves till recovered from their fatigues. I found one in the well of my carriage, another in the folds of the gig apron, and a third in a shoe under my bed! The irides are of a lovely yellow and carmine blended, the yellow forming a circle nearest the pupil. Some eggs were given me by a native as the eggs of this bird, which were precisely similar in all respects, save that of size, to those of the *Gallinula phœnicura*. Axis 13 lines, diam. 10 lines" (Layard, *tom. cit.* p. 267). Of course these birds must have migrated from the mainland of India; but still they differ from the Orissa race already mentioned.

Mr. Layard remarks that, in Ceylon, "Birds seem to lay in an unseasonable manner: I have obtained nests with eggs in every month. The small change of temperature and the unmarked character of the summer and winter, so to speak, of the tropics [or rather of the medial intertropical belt and its vicinity] are also carried out in animated nature within the same limit. I cannot at the moment remember any marked instance of migration [he had perhaps not then known that of *Porzana zeylonica*], except that of the common swallow, which appears in September, and of *Spias glaucippe* and all the species of the genus *Callidryas* among butterflies; these, in the months of April and May, may be seen in thousands, flying from west to east: the natives will tell you that they all go to Adam's Peak, there to die at the shrine of Buddhu. * * *

"It is difficult to draw the line between those birds which actually leave the island and those that only change their residence to breed or procure abundance of food. All the *ducks*, I believe, are migratory (except perhaps the little *Nettapus coromandelianus*, Gmel.) [and *Dendrocygna arcuata*]; they arrive at Pt. Pedro about October and November, but much depends on the lateness of the season, and some species are not found *at* *any time* in the southern portions of the island. Again, the Gulls and Terns are undoubtedly migratory, some partially, some totally; but *where* to draw the line? I have often entered a species in my list as '*totally*,' when, going on government service to another part of the island, out of the influence of the monsoon, lo and behold my '*totally migratory species*' was quietly fishing away, unconscious of all the perplexity it was giving me!! However, I never found the nests of them in the island. They may breed in the rocks round Trincomalee" (Ann. & Mag. N. H. 1853, xi. pp. 227, 228). He obtained, however, an egg of *Dromas ardeola*, or which he believed to have been of that species.

It may here be noticed that *Batrachostomus moniliger* was described by Dr. Jerdon (B. India, i. p. 189) from a Ceylon specimen, though there can be little doubt that the species inhabiting the peninsula of India will prove identical.

Rejecting the admitted varieties of Indian species (and also the dubious *Macropygia*), there remain 37 species or races of birds observed in Ceylon which have not hitherto been noticed elsewhere; but ten of these are especially akin to as many Indian forms:—

Loriculus edwardsi	to	L. vernalis.
Athene castanoptera	,,	A. radiata.
Megalæma zeylanica	,,	M. caniceps.
Malacocercus striatus	,,	M. bengalensis.
Pomatorhinus melanurus	,,	P. horsfieldi.
Alcippe nigrifrons	,,	A. atriceps.
Drymœca valida	,,	D. sylvatica.
Dicrurus minor	,,	D. macrocercus.
D. leucopygialis	,,	D. cærulescens.
Palumbus torringtoni	,,	P. elphinstoni.

These, as others in a higher degree, may be regarded as local specializations; but the curious fact still remains, that *Malacocercus striatus* is much more closely akin to the Bengal species of its genus than to any of those inhabiting the Indian peninsula. One species only, *Brachypteryx* (?) *palliseri*, is known from a single specimen only, probably female; and *Cisticola homalura* may be considered as somewhat doubtful at present. The only peculiar generic form is *Phœnicophæus* (as distinct from *Xanclo-*

stomus); while among the numerous species peculiar to the peninsula of India with Ceylon the only restricted generic form is *Ochromela,* which is common to the grassy summits of the Nilgiris and the most elevated parts of the island. It will be remarked that nearly all of the peculiarly Cinghalese species belong (as might be expected) to the mountainous portion of the island, the Jungle-fowl being the most striking exception; while certain others are specially common to the mountains of Ceylon and those of Southern India (more especially the Malabar ghâts), increasing in number southward. The small Chat-flycatcher (*Ochromela nigrorufa*) already noticed is a remarkable instance, as keeping to the highest altitudes exclusively; and the same is likely to prove true of the fine large Nilgiri Tree-Pipit (*Pipastes montanus*), which does not yet appear to have been observed in Ceylon. That *Myiophonus horsfieldi* (or a specialized representative of this bird) has not been observed in the island is worthy of notice; but I have before expressed an opinion that the higher regions of Ceylon have not yet been sufficiently explored, nor the southernmost hill-districts of the mainland of India. Still a *Myiophonus* is not at all a likely bird to have been overlooked; nor a Bulbul of the division *Otocompsa,* representative of *O. jocosa,* which is so conspicuous an inhabitant of the mainland of India generally south of the Himalaya.

Further Addenda to the Commentary on Dr. Jerdon's *'Birds of India'**.

79. ATHENE CUCULOIDES.

Mr. Gurney has called my attention to certain distinctions observable in a Japanese race supposed hitherto to be this species. The tail has only six narrow white bars, one terminal and another of them at the extreme base of the feathers, so that four only remain to constitute the conspicuous barring of the rectrices; the markings of the wing-primaries and secondaries are also fewer and further apart than in the common Himálayan bird. In India the latter is quite peculiar to the Himálaya, whereas in Burma the race considered hitherto as identical extends down to the level of the sea-shore; a pair had their abode in the verandah of Col. Phayre's residence in Rangoon. This Indo-Chinese bird requires now to be compared with the Japanese race, which latter seems to be sufficiently distinct to warrant the application of a new name; and I therefore propose to designate it *Athene Whiteleyi*. Except in the comparative fewness of the markings upon the flight-feathers of the wings, and more especially the rectrices, it entirely resembles the *A. cuculoides*. The Chinese species hitherto referred to *A. Cuculoides* is probably identical with that of Japan.

---

* *Vide anteà*, pp. 183–185.

CERTHIA FAMILIARIS, Linn.

Mr. Gould has an example undoubtedly of this species from the Western Himálaya, presented to him by the person who shot it.

LANIUS ISABELLINUS, Hemprich & Ehrenberg.

A specimen was procured by the late Dr. Gould in Sindh, as noticed by Lord Walden (p. 224, *anteà*).

488. SAXICOLA OPISTHOLEUCA.

It does not sufficiently appear (Ibis, 1867, p. 14) that I regard this bird as distinct from *S. leucuroides*.

722. EUSPIZA LUTEOLA.

I have before noticed the song of this bird (p. 184, *anteà*). Lord Lilford remarks that the allied *E. melanocephala* "has an agreeable song" (Ibis, 1860, p. 139).

Arboricola charltoni (p. 160, *anteà*). Erase the words "Tenasserim Mountains."

MALACORTYX SUPERCILIARIS, nobis; *Rollulus superciliosus*, J. E. Gray, "Knowsley Menagerie," Aves, pl. xvi.

Of this fine Quail, heretofore only known from a pair, male and female, in the Derby Museum of Liverpool, which were said to have been brought from India, two examples were shot from a flock passing overhead in the vicinity of Mussooree in unusually cold weather, one of which was given to Colonel l'Estrange, of the Royal Artillery, who has kindly submitted the specimen to my inspection. It is a true Quail, of peculiar *generic* form; and Mr. Gould intends to figure the species in his 'Birds of

Asia.' At the present time so fine a species is quite an unexpected addition to the list of Indian game-birds.

978. Larus fuscus will, I strongly suspect, prove identical with *L. fuscescens* (*anteà*, p. 176).

XVIII.—*The Avifauna of the Andaman Islands.* By R. C. Beavan, Capt. Bengal Staff Corps, C.M.Z.S.

In the Appendix to Dr. Mouat's 'Adventures and Researches amongst the Andaman Islands' published in 1863, Mr. Blyth gives a *resumé* of what was then known of the fauna of the Andaman and Nicobar Islands. But since that date our knowledge of the bird class, more especially of those islands, has been considerably added to by the exertions of Colonel R. C. Tytler, a gentleman well known to science as a naturalist, and whose tenure of office at Port Blair, the Convict Settlement of the Andamans, gave him many opportunities of adding to the list of their birds. This information he has been kind enough to place at my disposal, and I therefore intend in the following pages to record his notes, with his initials appended, as well as to enumerate all the species of birds known to have been found on those islands up to the present time.

In several instances I have also quoted Mr. Blyth's descriptions of new species (which are much scattered through various volumes of the Journal of the Asiatic Society of Bengal) so as to render this paper as complete as possible.

1. Hæmatornis cheela (Latham). Crested Serpent-Eagle.

This, as well as the next species, is tolerably common. A live specimen was sent from Port Blair by Col. Tytler to Mr. Grote, of Calcutta, and mistaken by the latter, it appears, for one of his new species, under which impression it was, I believe, forwarded to England.

2. Hæmatornis elgini, Tytler. Elgin's Serpent-Eagle.

This fine new species was discovered by Col. Tytler on the Andamans, and named by him after the late Lord Elgin, then Governor-General of India. It was originally described in the

Journal of the Asiatic Society for 1864 (p. 87), and again by Mr. Blyth in the 'Ibis' for 1863 (p. 118). Besides differing somewhat in coloration, it may be distinguished easily from the preceding species by the difference in size, being somewhat smaller. The dimensions of specimens in Col. Tytler's collection are as follows:—

Hæmatornis cheela,	juv.,	has the wing	15·5	inches.
,, ,,	adult	,,	16·12	,,
Hæmatornis elgini,	sp. A.	,,	14	,,
,, ,,	sp. B.	,,	14	,,
Mr. Blyth's specimen	described as above		14	,,

so that 14 inches seem to be a constant measurement for the closed wing of the latter.

3. Haliaetus leucogaster (Gmelin). Grey-backed Sea-Eagle.

"Abundant on the Andamans, and also observed on the island of Narcondam, when passing in the steamer" (R. C. T.).

4. Falco peregrinus, Gmel. Peregrine Falcon.

"I once saw a pair of Falcons on Ross Island, evidently this species, but could not obtain a shot" (R. C. T.). This bird has not previously been recorded from the Andamans.

5. Milvus govinda, Sykes. Pariah Kite.

"Two fine specimens of *Milvus govinda* were shot on Viper Island before I left, the only ones I ever saw there; they were hovering over the convicts' huts, apparently on the look out for offal" (R. C. T.). Not previously recorded, except by myself (*anteà*, p. 420).

6. Spizaetus andamanensis, Tytler. Andaman Hawk-Eagle.

This species was originally described in the 'Proceedings' of the Asiatic Society of Bengal for 1865, p. 112. The following description is taken from specimens in Col. Tytler's collection:—

♂	Length 25·5 in.,	wing 13·5 in.,	tarsus 3·5 in.,	tail 10·25 inches.
♀	,, 24·5	,, 13·5	,, 3·5	,, 10·25 ,,
?	,, 23·12	,, 14	,, 3·75	,, 10·25 ,,

Bill and claws slaty horn-colour; legs feathered to the toes, which latter are of a dirty yellow colour. The tail usually has seven transverse bars of a darker hue than the rest. The general colour of the bird is creamy white, somewhat inclining to rufous on the head, upper tail-coverts, and interior of thighs. The wings, tail, and lower nape are brown; the head in some specimens is slightly marked with longitudinal brown striæ; and the under wing-coverts of all spotted with the same. This species will probably be classed next to *Spizaëtus limnaëtus* of Lower Bengal and the Burmese countries, from which, however, it differs conspicuously in the colour of the plumage.

7. POLIAETUS ICTHYAETUS, Horsf. White-tailed Sea-Eagle.

"A fine Sea-Eagle flew over my house on the 2nd of July, evidently a stranger, from the number of crows which followed it. I examined him with a glass, but he was too far and high up to judge accurately" (R. C. T.).

8. BULACA SELOPUTO, Horsf.? Malayan Wood-Owl?

"I observed a large Owl once fly over Ross Island, but never had an opportunity of observing it again" (R. C. T.).

9. EPHIALTES LEMPIJI, Horsf. Large Scops Owl.

"A specimen of this species was caught alive and brought to me" (R. C. T.).

10. NINOX AFFINIS, Tytler, sp. nov.? Andaman Hawk-Owl.

Dimensions taken from skins in Col. Tytler's collection are as follows:—Length 9·5 to 10 in., wing 6·75 in., tail 4·36 to 4·5 in., bill at front nearly ·75 in., tarsus ·75 in. Closely allied to *Ninox scutellatus* (Raffles) but very considerably smaller, and differing also in being much more rufous on the under parts, and darker generally above. "Not uncommon at Aberdeen Point, Port Blair, in heavy jungles and thick forests" (R .C. T.).

11. HIRUNDO ANDAMANENSIS, Tytler, sp. nov.? Andaman Swallow.

Length 4·36 in., wing 3·5 in., tail 1·86 in., bill at front ·18 in., tarsus over ·25 in. The upper parts, including head, shoulders, back, and upper tail-coverts, are of a shiny purple; wings and tail brown; under tail-coverts the same, with purple tips to the feathers; throat, breast, and belly white. Bill black; legs apparently light yellow in the live bird. The tarsus not feathered. This description is taken from a specimen in

Col. Tytler's collection. The bird is probably migratory, only visiting Port Blair at certain seasons. It was observed by Col. Tytler to be abundant between Aberdeen and Phœnix Bay, keeping to open and cleared spaces in the jungle, chiefly along the newly made roads.

12. HIRUNDO RUSTICA, Linn. Common Swallow.

"Comes at certain seasons, and is not at all uncommon" (R. C. T.).

13. ACANTHYLIS GIGANTEUS, Temm. Brown-necked Spine-Tail.

"Since recording the remark on this species in Mouat's 'Appendix,' I have seen several specimens of this magnificent Swift flying round Ross Island" (R. C. T.). It has been sent to the Museum of the Asiatic Society from that locality by Col. Tytler.

14. COLLOCALIA NIDIFICA, Gray. Brown Edible-nest Swiftlet.

"More or less common everywhere, but nests are found in peculiar places" (R. C. T.). I have noticed this bird breeding inside houses, on both Ross and Chatham Islands (Ibis, 1866, p. 221), but erroneously, I believe, referred the species to *C. fuciphaga*.

The dimensions of the nest of this species, taken from a good typical specimen in Col. Tytler's collection, are as follows:—Greatest breadth outside 3 in., transversely across 1·86 in., exterior depth about 1·75 in., interior depth 1·25 in. The general appearance outside is that of the rough outer shell of an oyster; inside the nest has been lined with threads of mucilage, which, having dried, form a peculiar-looking network-like bottom to the nest. It is generally of a dirty white colour except where it has joined the rock, at which point the material of which it is composed has become dark and discoloured. The bird lays two to three eggs only, of a pure white colour.

Another small dark *Collocalia* is common. Col. Tytler has no specimens of *C. linchi* (*C. fuciphaga*, auct.) with which to compare his specimens, but from recollection thinks his bird is distinct. He therefore provisionally calls it

15. Collocalia affinis, Tytler, sp. nov.? Small Edible-nest Swiftlet.

The dimensions of specimens in his collection are as follows:—

♂ Length 3·75 in., wing 3·52 in., tail 1·36 in.
♀ „ 3·5 „ 3·75 „ 1·36 „

Descr.—The upper parts are jet black, with green and blue reflections; throat and breast brown; belly yellowish white; under tail-coverts dark brown, with green reflections, each feather edged with white; bill and legs black.

The male is a slightly larger and darker bird than the female. The nest of this species in Col. Tytler's collection resembles that of *C. nidifica*, but is considerably smaller and perhaps whiter, on which account it is more valued by the Burmese and others, who collect both kinds for the Chinese and Penang markets. Extreme outside diameter 1·75 in., transversely across 1·5 in., depth inside ·5 to ·75 in., and outside 1 inch. It is generally abundant at Port Blair, especially between Aberdeen and Navy Bay, where every cave is full of their nests and those of the previous species.

Captain Blair, the founder of the original Settlement on the Andamans, in 1789, has given a good account of the nidification of both these peculiar birds, which is that quoted by Dr. Mouat (p. 186).

16. Caprimulgus asiaticus, Lath.? The Common Indian Nightjar?

"I observed two *Caprimulgi* on one occasion, but could not get them" (R. C. T.). This species will probably turn out to be *C. asiaticus* from the neighbouring coast of Burmah, for I have observed them at sea between the two.

17. Merops philippensis, Linn.

Blue-tailed Bee-eater has been observed.

18. Merops quinticolor, Vieillot.

Chestnut-headed Bee-eater "is also common" (R. C. T.).

19. Halcyon leucocephalus (Linn.)*. White-headed Kingfisher.

---

* [*Cf.* P. Z. S. 1866, p. 553.—Ed.]

The true Burmese race of this large Kingfisher, with the cap albescent, is the one which is "very abundant, frequenting the groves of mangrove which skirt the sea-shore" (R. C. T.).

20. HALCYON COROMANDELIANUS (Scopoli).
The Ruddy Kingfisher is "common" (R. C. T.).

21. HALCYON FUSCUS (Bodd.)*. White-breasted Kingfisher.
"Common on the main island" (R. C. T.).

22. HALCYON ATRICAPILLUS (Gmel.). Black-capped Purple Kingfisher.
"This Burmese species is also common" (R. C. T.).

23. TODIRHAMPHUS COLLARIS (Scopoli)†. White-collared Kingfisher.
"Very plentiful on the mainland as well as on the smaller islands" (R. C. T.). Noticed by me as very common (Ibis, 1866, p. 221). It frequents the mangrove-bushes along the edge of the shore, and is frequently seen to descend to the ground, feed on something there (probably *Crustacea*), and return to its perch after a short interval, apparently never diving into the water after fish like other species.

A specimen killed June 20, 1865, measures in the flesh:—length 8·75 in., wing 4 in., tail 2·75 in., bill 1·52 in.; the legs are pinkish-slaty, darker towards the claws.

24. ALCEDO MENINGTING, Horsf. Horsfield's Kingfisher.
"Specimens procured at Aberdeen" (R. C. T.).

25. PALÆORNIS ALEXANDRI (Linn.). Alexandrine Parrakeet.
"Very common on the main as well as the smaller islands" (R. C. T.).

26. PALÆORNIS ERYTHROGENYS, Blyth‡. Red-cheeked Parrakeet.

---

* [*Cf.* P. Z. S. 1866, p. 554; Ibis, 1866, p. 347.—ED.]

† [*Cf.* P. Z. S. 1866, p. 554.—ED.]

‡ [This should probably stand as *P. nicobaricus*, Gould. *Cf.* P. Z. S. 1866, p. 555.—ED.]

A species which is apparently peculiar to the Andamans and Nicobars. It is very abundant at Port Blair, and I procured several specimens in June 1865.

27. Palæornis affinis, Tytler, sp. nov.?

This species I have not myself seen, but Col. Tytler describes it to me under the above name as being "generally like *P. erythrogenys,* the red cheek-mark and coloration of which it posesses, but differs constantly in having a black bill." *P. erythrogenys* he has seen in all stages, and it always has a red bill. This is the bird probably that Mr. Blyth mistook for the female of *P. erythrogenys.*

28. Palæornis torquatus (Bodd.). The Rose-winged Parrakeet.

"I introduced several pairs of this species from Calcutta, but I fear most of them were recaptured by convicts; however, some of them flew off into the heavy jungles" (R. C. T.).

29. Loriculus vernalis (Sparrm.). Indian Lorikeet.

"Five Lorikeets flew over from the mainland to Ross Island. I tried all I could to examine them with the aid of a glass, but their movements were so rapid and the tree so full of leaves that I found the species difficult to determine; still, from the observations made, I think beyond doubt they were *L. vernalis*; and since this I had several caught, which proved to be so" (R. C. T.).

30. Muelleripicus hodgii, Blyth. Hodge's Woodpecker.

"This noble Woodpecker is not uncommon on the mainland; I have had several shot and sent to me" (R. C. T.). The following is Mr. Blyth's short account of this new species (J. A. S. B. 1860, p. 105):—

"Wholly black in both sexes, except the crown, occiput, and moustaches of the male, which are vivid crimson as usual, and the occiput only of the female. It is smaller than the *M. hodgsoni,* Jerdon, of Malabar, or *M. javensis,* Horsf., of the Malayan peninsula and more western islands, the closed wing measuring but 7¼ in., the middle tail-feathers 6 in., and the beak to forehead 1¾ in."

31. Picus andamanensis, Blyth. Andaman Pied Woodpecker.

Described (J. A. S. B. 1859, p. 412, note) as follows:—"Nearly affined to *P. anatis*, Temm., of Java, which it resembles in size and proportions, as also *P. pectoralis*, Bl., all three differing from the common *P. macei* of Bengal by their smaller size and white-spotted middle tail-feathers; in *P. macei*, as also in the affined Himalayan *P. brunneifrons*, the four medial *rectrices*, and in *P. atratus* the six medial *rectrices* are spotless black, the last-named being also the largest of this particular group; in *P. andamanensis* the middle tail-feathers have three distinct pairs of white spots, while in *P. pectoralis* they have four pairs of white spots of larger size; but the Andamanese bird is specially characterized by the large round black spots upon its breast, each margined with whitish; the ear-coverts also are longitudinally streaked with black, and the flanks are more conspicuously rayed than in the others. In other respects this bird resembles *P. macei*. The lower tail-coverts are bright crimson, and the crimson tips of the coronal feathers of the male are less developed than in *P. macei*, especially towards the forehead. Length of beak to gape 1 in., of closed wing $3\frac{7}{8}$ in., and of middle tail-feathers $2\frac{1}{2}$ in."

32. Centropus andamanensis, Tytler, sp. nov. Andaman Coucal.

This quite new species is of a chestnut, or rather cinnamon-chestnut colour, and a little smaller than the Indian *C. rufipennis*, but wants entirely the black markings of that bird. It is apparently not uncommon, judging from the frequently heard call, which somewhat resembles that of *C. rufipennis*; but living as the birds do in the dense cane-jungles, they are as difficult to see as they are to get at. "I only procured two specimens, the best of which was sent to the Asiatic Society's Museum, and the other unfortunately got destroyed" (R. C. T.).

33. Eudynamis orientalis (Linn.).

The Koel was twice observed by Col. Tytler, besides being frequently heard calling in the woods.

34. Arachnothera pusilla, Blyth?
The Little Spider-hunter "has been observed, but no specimens hitherto procured" (R. C. T.).

35. Nectarinia pectoralis, Horsf. Banded Honey-sucker.
This species had previously been found to abound in the Nicobars; and Col. Tytler has since procured it in his garden at Port Blair.

36. Lanius cristatus, Linn. The Brown Shrike.
"Is not uncommon" (R. C. T.).

37. Lanius lucionensis, Scopoli.
The Ashy Shrike is also abundant.

38. Tephrodornis grisola, Blyth.
The Arracan Wood-Shrike is included in Mr. Blyth's list.

39. Graucalus macæi, Lesson. Large Cuckoo-Shrike.
Andaman specimens of this bird agree better with those from Burmah than the Bengal bird. The former appears to have the bill larger, and to be on the whole a slightly larger bird, but the difference is not sufficient to cause it be considered distinct. "I have seen several on the mainland as well as the smaller islands" (R. C. T.).

40. Pericrocotus speciosus (Latham). The large Minivet.
"Not common on the mainland" (R. C. T.).

41. Pericrocotus andamanensis, Tytler, sp. nov.*? Andaman Minivet.
This bird was, in the former list, considered to be *P. brevirostris*, to which it is very nearly allied; but it has the scarlet plumage of *P. speciosus* with more of yellow or flame-colour mingled with the scarlet. It is also apparently smaller. The dimensions of a specimen in Col. Tytler's collection are as follows:—length 7 in., wing 3·36 in., tail 3·5 in., bill at front ·52 in. In other respects both birds are much alike.

---

* [Lord Walden informs us that this species must very closely resemble *P. xanthogaster* (Raffles, Trans. Linn. Soc. xiii. p. 309) from Sumatra, with which *P. igneus*, Blyth (J. A. S. B. xv. p. 309), from Malacca is identical.—Ed.]

42. Dicrurus andamanensis, Tytler, sp. nov.

Col. Tytler tells me that this is a new species, peculiar in having hair-like feathers springing from the nostril. Both his specimens have white lunules on the under wing-coverts.

There seems to be a great deal of confusion regarding the Bhimraj or *Edolius* of the Andamans. Mr. Blyth says (J. A. S. B. 1860, p. 106) that it "appears to be constantly a little larger than Malayan peninsula specimens, with more tendency to show a rudimental frontal crest; this, however, is less developed than in Burmese and Tenasserim specimens." He had previously stated (J. A. S. B. 1859, p. 272) that "the Bhimraj of the Andamans (as was remarked on a former occasion) is identical with the Malayan species with the rudimentary frontal crest;" and then goes on to compare specimens from various localities, Penang, the Tenasserim provinces of Burmah, Tipperah, Ceylon, Bengal, and the Andamans; and winds up with the conclusion, "after considerable study of numerous specimens from various localities, I can at present recognize *two* races only as sufficiently distinguishable, being the crestless or almost crestless one from the Andamans and Malayan peninsula, and the conspicuously crested race elsewhere. When better known, each from an adequate series of both sexes and of all ages, from whatever locality, it is probable that these will be acknowledged as two species."

Dr. Jerdon (B. Ind. i. p. 437) separates the Malabar bird from *E. paradiseus* of North and East India, and considers the Malay race, *E. malabaricus* (Latham) (*E. malayensis*, Blyth, and *E. setifer*, Temminck), to be also distinct. Regarding the Andaman race, he gives no opinion, but merely quotes Blyth; and as the latter naturalist has mentioned, as quoted above, that "the Andaman bird appears *constantly* to be a little larger than the Malayan," it will perhaps solve the difficulty if Col. Tytler's opinion be adopted, and the Andaman race separated as distinct under his name of

43. Edolius affinis, Tytler, sp. nov.* ?

The Andaman Bhimraj has no frontal crest whatever, and the character of the feathers of the head approximates nearly that of *Bhringa*. Col. Tytler has had the bird alive, and never observed it attempt to raise the head-feathers (small as they are). The dimensions of a skin in his collection are as follows:—length to end of ordinary tail 12·5 in., rest of tail 9·5 in., wing 6·36 in., bill at front 1 in., bill at gape 1·36 in., tarsus barely 1 in.

---

* [Lord Walden tells us that this is probably one of the races of which *E. rangoonensis*, Gould, P. Z. S. 1836, p. 5, is the type.—Ed.]

44. ARTAMUS LEUCOGASTER, Valenc.* (*Leptopteryx leucorhynchus*, Horsfield, nec *Lanius leucorhynchus*, Gmelin, of the Philippines). White-bellied Swallow Shrike.

"This graceful bird appears generally about Ross Island from about 4 P.M. to dusk. Numbers fly past the verandah of my house, and I have seen some dart through in pursuit of insects" (R. C. T.). I found this species, in June 1865, frequenting clearings in forest-jungles on the mainland, perching on the stumps and dead boughs; social and in some numbers in one spot, but each bird foraging for himself entirely "on his own hook."

The "*Myiagra azurea* (Bodd.)," of Mr. Blyth's previous list appears to be an entirely new species; I have therefore the honour of proposing for it the name of

45. MYIAGRA TYTLERI, nobis, sp. nov. Tytler's Azure Flycatcher.

The general appearance is that of *M. azurea*, but it is a slightly larger bird, and differs conspicuously in entirely wanting the black gorget on the throat of the male †. The under parts also, instead of being white, as in *M. azurea*, in our species are wholly blue, of a slightly duller hue, perhaps, on the lower abdomen and under tail-coverts. The upper parts are more brightly coloured than in *M. azurea*. Dimensions of a skin are as follows:—length 6 to 6·25 in., wing 2·75 in., tail 3 in., tarsus ·52 in. The tail and tarsus thus appear proportionally longer than in the other species. The bill at front is ·5 in., and at base ·75 in. The female is unknown. Col. Tytler tells me that he once mentioned to Mr. Blyth having seen what he thought at the time was a *Niltava* flitting through his verandah at Port Blair. He is now confident that it was the species under notice, and wishes me to mention the fact, in case Mr. Blyth may have recorded the existence of a *Niltava* in the Andamans.

---

* [Specimens sent by Capt. Beavan are said by Lord Walden (P. Z. S. 1866, pp. 555, 566) not to differ from *A. leucopygialis*, Gould, a well-known Australian species.—ED.]

† [The males of Indian specimens sometimes, as we learn from Lord Walden, want this black gorget.—ED.]

46. PETROCOSSYPHUS CYANEUS (Linn.).

The Blue Rock-Thrush is recorded in Mr. Blyth's previous list.

47. GEOCICHLA INNOTATA, Blyth. Orange-coloured Ground-Thrush.

This species was described by Mr. Blyth (J. A. S. B. xvi. p. 146) from specimens procured from the Malayan peninsula*. It is closely allied to *G. citrina* of India, but is rather darker, and wants the white wing-spot of the latter. In Mr. Blyth's list Col. Tytler remarks that "he had only seen one in his garden on Ross Island," but he has procured several since.

48. TURDUS RUFULUS, Drapiez; *T. modestus*, Eyton, P. Z. S. 1839, p. 103†. Rufous Thrush.

This species extends throughout Burmah and Malayasia to the Andamans, according to Dr. Jerdon.

49. OREOCINCLA INFRAMARGINATA, Blyth.

The Andaman Thrush described (J. A. S. B. 1860, p. 106) as follows:—"Uniform dark olive above with conspicuous pale rufescent whitish supercilia, and light rufescent spots tipping the wings-coverts; beneath pale, inclining to rufo-fulvous on the breast and front of the neck, pure white at centre of belly; the lower tail-coverts dark olive, largely tipped with white; each feather of the lower parts, except on middle of throat and of belly, somewhat narrowly tipped with the colour of the back; outer caudal feathers successively more largely tipped with dull white, though even on the outermost these white tips are but slight. The usual *Oreocincla*-markings on the inner surface of the wing. Bill dusky, and legs pale corneous. Closed wing $4\frac{5}{8}$ in., tail $3\frac{1}{2}$ in., its outermost feathers $\frac{3}{8}$ in. shorter than the middle pair, bill to gape $1\frac{3}{16}$ in., tarse $1\frac{1}{16}$ in. Short first primary $\frac{3}{4}$ in. long, the second equalling the fourth, and a little shorter than the third. This bird approximates the female of *Merula wardii*, Jerdon."

---

* [The form from the Nicobar Islands, considered by Mr. Blyth to be distinct, and named by him *G. albogularis* (J. A. S. B. xvi. p. 146), should be carefully compared with Andaman specimens.—ED.]

† [The type of Drapiez's species was from Java, and is probably the same as *T. javanicus*, Horsf. (Linn. Tr. xiii. p. 148). The identity of the Malayan bird described by Mr. Eyton with the former has yet to be shown.—ED.]

50. OTOCOMPSA JOCOSA (Linn.). Red-whiskered Bulbul.

On further comparison of this bird with Bengal specimens, Col. Tytler has come to the conclusion that there is no difference between the two, and that the Andaman race, as previously noted (Mouat's 'Appendix,' p. 361. no. 45), is not distinct.

51. IRENA PUELLA (Lath.). Fairy Blue Bird.

The "Indian race as distinguished from the Malayan not very common" (R. C. T.).

I. malayensis, Moore, Cat. B. Ind. Mus. i. p. 274. There is some confusion about the Black-naped Oriole of the Andamans. Mr. Blyth (J. A. S. B. 1859, p. 274) gives a description of it, and is inclined to think it is *Oriolus coronatus*, Swains. (*O. hippocrepis*, Wagler), an opinion which he reiterates (J. A. S. B. 1860, p. 106). In Dr. Mouat's work, however (pp. 352 and 361. no. 46), he puts it down as apparently *O. horsfieldi*, Bonap. (the *O. galbula* of Horsfield, apud Jerdon), so that the real species is a matter still open for comparison and inquiry. In Mr. Blyth's opinion it differs conspicuously from *O. macrurus*, Blyth, of the neighbouring Nicobar Islands, and also from both the kindred species of India and Burmah. Col. Tytler has provisionally called it

52. ORIOLUS ANDAMANENSIS, Tytler, sp. nov. (?);

but he does not know *O. horsfieldi*. Specimens in this collection have the primaries and secondaries totally black, the tertiaries very slightly tipped with yellow, and the winglet also, all the upper wing-coverts and scapulars being bright yellow. In the tail all but the two middle pair of black feathers are yellow-tipped, more broadly so towards the outermost. The black nuchal mark extends quite round through both eyes, and is well defined. Dimensions of the two skins:—

Length 9·75 in., wing 5 in., tail 4 in., tarsus ·86 in.

Length 10 in., wing 5·12 in., tail 4 in., tarsus ·86 to 1 inch. Mr. Blyth's dimensions (J. A. S. B. 1859, p. 272) are, "wing $5\frac{1}{4}$, tail $9\frac{3}{4}$, bill to gape $1\frac{3}{8}$." The measurement given of the tail is preposterous, and is probably a misprint for $4\frac{3}{4}$ in.; for in the next few lines he tells us that the tail of the Andaman species is proportionately shorter than in *O. macrurus*, which latter commonly has it 5 inches.

53. Oriolus melanocephalus, Linn. Black-headed Oriole.

"Not uncommon; a peculiarly small, brightly coloured bird, a specimen of which was sent to the Asiatic Society's Museum" (R. C. T). This is probably the variety I noticed in 1865 at Moulmein, where I procured a full-grown male in most perfect plumage, measuring only in length 8·52 in., with wing 5·12 in., and tail 3·25 in. I noted at the time that the Burmese race seemed generally a good deal smaller than the Bengal one in this as well as in several other species of birds which are common to both countries.

54. Copsychus saularis (Linn.). Magpie-Robin.

"Very abundant throughout the island; the males are more brilliant in colour than those generally seen in Bengal, and sing exquisitely. They are now in full song (in May)" (R. C. T.). I noticed that, like the Burmese race, these birds were much more familiar than those in Bengal, frequenting the immediate vicinity of houses, on Ross Island, like Robins in England.

55. Cittacincla albiventris (Blyth, J. A. S. B. xxvii. p. 269). White-bellied Shahma.

"Common, but not so plentiful as I expected. They are found not only on the main island, but on the smaller islands, and frequent the garden grounds. The habits of this bird are more those of *Copsychus saularis* than of *Cittacincla macrura*" (R. C. T.). Mr. Blyth says (J. A. S. B. 1860, p. 107) that this bird "has much the appearance of being a fertile hybrid between

C. macrurus and *Copsychus saularis*! In several specimens of it, however, I can detect no variation whatever. * * * I have a fine healthy pair alive, and the male is a fair songster, with some very deep notes, alternating with some shrill and very Dhayal-like (*Copsychus*) notes; and, so far as I have heard as yet, the song is more broken or delivered in snatches, like that of the Dhayal, or less continuous than in the common Shahma. * * * The female is of a duller colour than the male, especially on the wings and breast, which latter is glossless black; tail also shorter, and the legs in both sexes carneous."

56. PRATINCOLA INDICA, Blyth.

The Indian Bush-Chat "is not uncommon" (R. C. T.).

57. ARUNDINAX OLIVACEUS, Blyth. Thick-billed Reed-Warbler.

Recorded by Mr. Blyth.

58. MOTACILLA LUZONIENSIS, Scopoli.

The White-faced Wagtail of India is common in the cold season.

59. BUDYTES CITREOLA (Pallas).

The Yellow-headed Wagtail has been observed by Col. Tytler on Aberdeen Point.

60. ANTHUS CERVINUS (Pallas)*. The Vinous-throated Pipit.

According to Mr. Blyth, specimens agree with those from Pegu and China; but this species has not hitherto come under Col. Tytler's observation.

61. ZOSTEROPS PALPEBROSUS, Temm.

The White-eyed Tit had previously been procured from the Nicobars; one specimen was shot on Aberdeen Point and brought to Col. Tytler, so that probably it is not uncommon.

62. CORVUS ANDAMANENSIS, Tytler†.

The Andaman Crow is quite distinct, according to Col. Tytler, from the *C. culminatus* of India and Burmah, although considered identical by Mr. Blyth. The former finds it much nearer the *C. intermedius* of the Himalayas, but it is slightly larger than that species. It is abundant in large flocks and formerly fed entirely on the sea-shore, but now frequents the houses and barracks for the sake of offal. I am inclined, after a careful examination of several specimens, to agree with Col. Tytler, having besides, during my visit to the Andamans in 1865, noticed that the voice of this species differs entirely from that of *C. culminatus*. Its habit, too, of congregating in flocks is enough almost in itself to separate it as a distinct species.

---

* [Should probably be *A. rosaceus*, Hodgson, *vide suprà*, p. 32, note.—ED.]

† [*Cf.* Ibis 1866, p. 420, and 1867, p. 34, note.—ED.]

63. CORVUS SPLENDENS, Vieillot.

The Common Indian Crow was introduced for sanitary purposes by Col. Tytler, but does not appear to have thriven or multiplied.

64. DENDROCITTA BAYLEYI, Tytler (J. A. S. B. 1863, p. 88). Bayley's Tree-Pie.

A new species not uncommon on the mainland, and named after Mr. E. C. Bayley, the Home Secretary to Government. It is described also in 'The Ibis' (1863, p. 119), under the name of *D. bazlei*, an accidental error.

65. ACRIDOTHERES TRISTIS (Linn.).

The Common Myna was introduced into the settlement of Port Blair by Col. Tytler, and appears to have bred.

66. ACRIDOTHERES FUSCUS (Wagler).

The Dusky Myna was also introduced by Col. Tytler from Burmah, and has increased largely, several being always visible on Ross Island.

67. TEMENUCHUS ANDAMANENSIS, Tytler, sp. nov.? The White Myna.

This bird was considered by Mr. Blyth to be identical with his *Sturnia erythropygia* from the Nicobar Islands. But on comparison with a good drawing taken from the type specimen in the Museum of the Asiatic Society it is seen that that species has got a red rump, which is entirely wanting in the Andaman bird; and Col. Tytler has therefore separated the latter as a distinct species. Mr. Blyth's evidence is also *on the whole* in favour of its being distinct. I here quote it:—"Two more specimens from Port Blair, but still wanting the deep ferruginous colouring on the rump and upper tail-coverts; however, it is faintly indicated, and that intense colouring is probably peculiar to old males. There can be no doubt about the correctness of the identification. Length of a fresh specimen 7¼ in. by 12 in., closed wing 4⅛ in., tail 3 in., bill to gape 1⅛ in.; its colour yellow, leaden-blue at base of lower mandible. Legs ochreous-yellow; the tarse 1 in." (J. A. S. B. 1859, p. 274). But later he says, "of *Temenuchus erythropygius*, nobis, I have seen no Andaman example yet with distinctly rufescent upper tail-coverts" (J. A. S. B. 1860, p. 106). Col. Tytler has kept numbers alive, and is very familiar with the bird in all its phases of plumage, and says that the old males never do get the rufescent upper tail-coverts of the true *T. erythropygius*. We are therefore, I think, fully justified in considering the Andaman bird a distinct species.

The following is a brief description taken from specimens in Col. Tytler's Museum:—Head, neck, throat, and abdomen pure white; back and upper tail-coverts pure ashy-grey; under tail-coverts white, with a very faint tinge of rufous; wings and middle tail-feathers dark glossy black with green reflections; the outer tail-feathers tipped with creamy yellowish-white, most broadly so on the outermost pair, and decreasing towards the middle; irides pale yellow(?); the legs also yellow. The female differs from the male in having scarcely any green reflections on the wings, and the young is yet more dully coloured than the female. The species is very abundant on Ross Island, frequenting gardens and building in the neighbourhood of houses. It is very fond of ripe fruit, especially plantains.

68. CALORNIS AFFINIS, A. Hay.

"Not uncommon on the main island. I obtained the young in August" (R. C. T.).

69. CALORNIS CANTOR (Gmelin).

"Not uncommon in January and February" (R. C. T.).

70. Pastor roseus (Linn.). Rose-coloured Starling.

"Several of these birds arrive in flocks in January" (R. C. T.).

According to Col. Tytler *Eulabes religiosa,* Linn., does not occur at all, and the supposed *E. intermedia*, A. Hay, turns out to be a new species:—

71. Eulabes andamanensis, Tytler*. Andaman Grakle.

Differs conspicuously from *E. religiosa* in having a stouter bill, and in wanting the divisions of fleshy skin along the occiput. From *E. intermedia* it may be distinguished in not having nearly such a stout beak, and in having comparatively large lappets, which are almost entirely wanting in *C. intermedia.* Specimens of *C. javanensis* have also been compared with it, but differ in several important particulars, especially in the colour, shape, and size of the beak. Compared with the Ceylon *C. ptilogenys* the latter is seen to want the nude space which exists below the eye of *C. andamanensis.* Dimensions of a skin are as follows:—Length 11·25 in.; wing 6·37 in.; tarsus 1·25 in.; tail 3·5 in.; bill 1·12 in. at front, and at gape 1·5 in.

72. Munia striata (Linn.); *M. leuconota,* Temm. The Brown-backed Munia.

"Very abundant both on the mainland and on Ross Island in large flocks" (R. C. T.).

73. Estrelda amandava (Linn.). Red Waxbill.

Col. Tytler let loose some twenty-five of these elegant little birds, which have not, however, been since observed.

74. Osmotreron chloroptera, Blyth. Insular Green Pigeon.

Peculiar, according to Mr. Blyth, to the Andamans and Nicobars. "Not uncommon on the mainland" (R. C. T.).

---

* [Lord Walden has kindly informed us that this is decidedly distinct from his *E. intermedia* and *E. javanensis,* Cuv. He had prepared a description of it for his paper recently published in the 'Zoological Proceedings,' but not being quite satisfied of its differing from a species described by Prof. Schlegel (Nederl. Tijdschr. Dierk. 1863, p. 7), *Gracula dubia,* from an unknown locality, he withdrew it. He believes that the same bird inhabits also the Nicobar Islands.—Ed.]

75. Carpophaga sylvatica, Tickell. Green Imperial Pigeon.

"This splendid large green Wood-Pigeon is very abundant on the main island; I have seen nearly forty of them together on the top branches of trees" (R. C. T.).

76. Carpophaga myristicivora (Scop.)?

Col. Tytler tells me he once observed large flocks of White Pigeons on Narcondam Island, belonging either to this species or to *C. bicolor*.

Calœnas nicobaricus is not included in this list, for it has never yet been recorded as observed on the Andamans, though sent, according to Mr. Blyth, both from the Cocos and Nicobars; so that the probabilities are strongly in favour of its also inhabiting the intervening islands.

77. Chalcophaps indicus (Linn.).

The Bronze-winged Dove is very abundant about Aberdeen, where it is captured by the convicts, who call it "Green Pigeon." It evidently breeds there, for the fledged young were brought to me in June. Andamanese examples appear to be more brightly coloured than those from Bengal.

78. Turtur humilis (Temm.). Red Turtle Dove.

"Several of these beautiful Doves occasionally fly over from the mainland to Chatham Island" (R. C. T.).

79. Macropygia rufipennis, Blyth.

The Red-winged Tree-Dove must be included in this list, on Col. Tytler's authority.

80. Ægialitis pyrrhothorax? (Temm.)?; *Charadrius leschenaulti*? Lesser Sand-Plover.

"I think this species; but as it was but a casual and distant sight I had of the bird, I cannot at present determine" (R. C. T.).

81. Strepsilas interpres (Linn.).

The Turnstone has also been found.

82. Dromas ardeola (Paykull).

"The Crab-Plover is very common, and found in large flocks on the rocks about the sea-shore."

83. Gallinago scolopacinus, Bonap.

"The common Snipe is very common in the swamps about Aberdeen" (R. C. T.).

84. Euryzona canningi, Tytler. Canning's Rail.

Since the capture of the specimen described in 'The Ibis' (1863, p. 119) a second specimen has been obtained from Mount Harriet.

85. Herodias garzetta (Linn.). Little Egret.

"I have had this species alive, and identified it" (R. C. T.).

The species entered in Mr. Blyth's list as *H. concolor,* Bl., is distinct, and is the

86. Herodias andamanensis, Tytler, sp. nov.? Black Egret.

The young of this species are black *ab ovò,* for Col Tytler has kept several in confinement, whereas those of the species for which it has been mistaken are white. It is, besides, a smaller bird than *Demiegretta asha* (Sykes), although the description given by Dr. Jerdon (B. Ind. iii. pp. 747, 748) of the adult male of that species agrees well with this. The following dimensions are taken from Col. Tytler's specimens:—Length 19·5 to 19·75 in., wing 9·62 to 9·75 in., tarsus 2·25 to 2·37 in., bill 3 in.

"Found abundantly everywhere" (R. C. T.).

87. Ardeola leucoptera (Bodd.).

The Pond-Heron has been observed by Col. Tytler on only one occasion.

88. Butorides javanica (Horsf.).

The Little Green Heron has been identified and specimens procured since Mr. Blyth's list was written.

89. Querquedula andamanensis, Tytl. sp. nov.? Andaman Teal.

"From the fresh-water creek I obtained a beautiful little Teal, which I sent to the Asiatic Society's Museum for identification, but have never heard of it since; it was quite a new species, brown with blue wings, and, from the best of my recollection, somewhat like *Q. ipecuteri* (Vieillot) of South America. It was shot out of a flock" (R. C. T.).

90 Onychoprion anasthætus, Scopoli.

Recorded in Mr. Blyth's list.

91. Onychoprion melanauchen (Temm.)*.

"Very abundant in large flocks on the rocks" (R. C. T.).

92. Phaeton flavirostris, Brandt.

"I shot a fine female from my verandah one evening. It was evidently attracted by the white plumage of some domestic Pigeons near the house" (R. C. T.).

93. Anous stolidus (Linn.). Noddy.

Recorded in Mr. Blyth's list.

94. Anous tenuirostris, Temm (?).

A specimen boarded the vessel I was in, in June 1865, between the Andamans and Burmah. The white head was distinctly visible.

This completes our list; of these there are:—

Peculiar to the Andamans (22).

Spilornis elgini.
Spizaetus andamanensis.
Ninox affinis.
Hirundo andamanensis.
Palæornis affinis.
Muelleripicus hodgii.
Picus andamanensis.
Centropus andamanensis.
Pericrocotus andamanensis.
Dicrurus andamanensis.
Edolius affinis.
Myiagra tytlerii.
Oreocincla inframarginata.
Oriolus andamanensis.
Cittacincla albiventris.
Corvus andamanensis.
Dendrocitta bayleyi.
Temenuchus andamanensis.
Eulabes andamanensis.
Euryzona canningi.
Herodias andamanensis.
Querquedula andamanensis.

Species of uncertain determination (6).

Bulaca seloputo.
Caprimulgus asiaticus.
Arachnothera pusilla.
Carpophaga myristicivora.
Ægialitis pyrrhothorax.
Anous tenuirostris.

Species introduced by Col. Tytler (5).

Palæornis torquatus.
Corvus splendens.
Acridotheres tristis.
Acridotheres fuscus.
Estrelda amandava.

---

* [*Cf.* P. Z. S. 1866, p. 556.—Ed.]

XIX.—*On the Land-Birds of the Seychelles Archipelago.*

By Edward Newton, M.A., C.M.Z.S.

(Plate IV.)

The Seychelles Archipelago, a dependency of Mauritius, consists of about thirty islands, and is situated between 3° 42′ and 4° 50′ lat. S., and between 55° 15′ and 56° 2′ long. E. It was discovered by Vasco di Gama in 1502, was taken possession of by the French in 1742, and ceded to England by the treaty of 1815. Its formation, with the exception of, I believe, three islands, Frégate, Denis, and Bird Island, which are coralline, is granitic; its highest mountain, the Morne Blanc, in Mahé, is said to be 3000 feet high. Silhouette, as I should judge, rises to above 2000 feet, Praslin and Ladigue to 1500 feet, and none of the others to 1000 feet.

The Dependency is in charge of a Civil Commissioner, who resides at Port Victoria, Mahé. A French *patois,* called "Creole," is universally spoken by the lower class, but English is understood by a good many. The population in 1861 was 7486, that of Mahé being 6118; the greater part of it is made up of different African races, and a mixture between them and Europeans.

The principal industry is the cultivation of cocoa-nut trees and expressing the oil from the nut. The value of this article exported in 1865 exceeded £20,000, and is from extended cultivation steadily increasing; no use is made of the husk, so the value of the plantations is not yet fully realized. The other exports are vacoa-bags, salt fish, and timber. The vacoa-bags are woven from the leaves of the *Pandanus utilis,* and are used at Mauritius for containing the exported sugar. With the exception of the cocoa-nut, which comparatively requires little or no care, planting may be said to be at a discount, though the soil is exceedingly rich and fertile, and sufficient rice, maize, and farinaceous roots might be grown at small cost to support the entire population; but, as it is, a few acres only are planted, and large quantities of rice are imported to supply the deficiency. Fishing is by far the most popular employment; all the men are boatmen, and capital ones they make.

Mahé*, the largest and most important of these islands, is about 17 miles long and 5 wide; the other larger islands are Praslin and Ladigue to the north-east, and Silhouette to the north-west. These are high and rocky, with a considerable tract of forest still remaining upon them.

After these general remarks I must proceed to the particular subject of this paper. Ornithologists are aware that the avifauna of these interesting islands is very little known, and what few land-birds recorded as existing there were not recorded as occurring elsewhere. Prior to the year 1865 only four species were known; they were:—

(1) *Tinnunculus gracilis.*
(2) *Nectarinia dussumieri.*
(3) *Erythrœna pulcherrima.*
(4) *Turtur rostratus.*

Tinnunculus gracilis was described by Lesson (Tr. d'Orn. p. 93) from specimens in the Paris Museum, that author being unaware of the locality whence they came; and it is accurately figured by M. O. des Murs (Icon. Orn. pl. 25) from two specimens in the Paris collection, which were discovered at Seychelles in 1827 by Dussumier, and probably the same as those described by Lesson. These are the only two original descriptions of the species with which I am acquainted. Dr. Hartlaub, however, mentions (Ornith. Madag. p. 19) that M. Jules Verreaux had examined specimens of this species in Sganzin's collection; but on reference to the latter's "Notes sur les Mammifères et sur l'Ornithologie de l'Ile Madagascar" †, there seems no reason to suppose that these specimens were killed at Seychelles, but rather at the island of St. Marie, a French colony, off the east coast of Madagascar, of which Sganzin was governor, or on the "grande île Africaine" itself, and therefore belong to the allied species, the distinctness of which was pointed out by Mr. J. H. Gurney (Ibis, 1863, p. 34).

Nectarinia dussumieri was first described by Dr. Hartlaub (Journ. für Orn. 1860, p. 340) from two specimens in the Paris

---

* This island, as well as the place of the same name on the south-west coast of India, has its name from that of Mahé de Labourdonnais of historical celebrity.

† Mém. de la Soc. d'Hist. Nat. de Strasbourg, iii. 1840, p. 49.

Museum, collected by Dussumier. I am not aware of any other recorded specimens. Dr. Hartlaub afterwards altered the name to *N. seychellensis* (Orn. Madag. p. 35), without, however, stating his reasons for so doing.

Erythrœna pulcherrima was correctly described and drawn by Sonnerat under the name of "Pigeon violet à tête rouge d'Antigue"* (Antigue being the port of the island of Panay, and not the island of Antigua in the West Indies as has been supposed). Sonnerat had, previously to his visit to Panay, touched at Seychelles; and I can only suppose that some confusion must have existed in his collections, and that he had mistaken the locality from which he had obtained the species. Since then many specimens have been brought to Europe, and it is the best known of Seychelles birds in collections.

Turtur rostratus was named by Bonaparte (Consp. Av. ii. p. 62) from a specimen in the Paris Museum, brought from Seychelles by Dussumier. I can find no record of any other specimen in European collections.

In 1864, Lady Barkly obtained from Seychelles a live bird, called there the "*Pie chanteuse*;" it lived for about two months, and on its death she very kindly gave it to me; it proved to be an undescribed species, and has been named *Copsychus sechellarum* (Ibis, 1865, p. 331, pl. viii.).

Now, from the above, it will be seen that hitherto only five land-birds had been recorded as existing at Seychelles, and that these five were all peculiar to the Archipelago.

During a residence of upwards of seven years at Mauritius I had had no opportunity of visiting these islands, and I had procured but very few specimens from them; accordingly I determined, when coming to Europe on leave, to stop a month on my way, the steamers of the French Company "Messageries Impériales" calling there regularly on their route between Mauritius and Aden.

I left Mauritius on the 18th of January last on board the steamer 'Emirne,' and arrived off St. Denis, Réunion, at sunrise on the following morning. As soon as we had obtained pratique I landed and called upon M. Lantz, of the Jardin des

---

* Voyage à la Nouvelle Guinée, p. 112, pl. 67.

Plantes. In the well-arranged museum in the garden there is probably the best collection in the world of Madagascar birds; but of those from the neighbouring islands it is, like our museum at Mauritius, lamentably deficient. Amongst the collection of Réunion birds I was surprised to see what I believed to be *Ardea schistacea,* a species not noticed in Mauritius, and which, M. Lantz assured me, was far from uncommon both in Réunion and in Madagascar; he had also a living bird, which he consigned to the care of M. Louis Berthelin, Agent de l'Administration des Postes, a zealous collector for the Société d'Acclimatation of Marseilles, who was a passenger on board the 'Emirne.'

We left St. Denis the same afternoon, and, after a voyage of continuously fine weather and without event, we sighted Seychelles at daybreak on the morning of the 24th. Mahé was on our port bow, while Frégate, Ladigue, and Praslin were on the starboard. Mahé as we approached it was beautiful—the outline rough and broken, the highest peaks hidden in mists, the mountains rising up almost immediately from the sea, leaving scarcely any flat ground at their bases. The coast is entirely fringed with verdant groves of cocoanut-trees, which in some places extend far up the slopes and valleys of the mountains; the trees being planted in regular rows up the incline, present from a distance the appearance of a vast beet-root garden. In other places may be seen scanty patches of cultivation, such as maize, rice, or sweet potatoes, or tracts of grass dotted here and there with clumps of shrubs, the land remaining altogether useless and unprofitable. But few houses are seen, as they are generally effectually screened from view by trees. These slopes rise to the height of 700 or 800 feet, and generally above them is a strip of natural bush or forest, the dead whitened stems of the Capucin tree standing prominently over the others. Then comes a perpendicular wall of granite, some 300 or 400 feet high, then a terrace with another strip of forest and another wall, and, last of all, forest on the top of the ridge. At two or three places on this side of the island broad spaces of red earth on the sides of the hills marked the sites of the landslips which occurred during the hurricane of October 1862, and which are still uncovered by vegetation.

At 8 A.M. we rounded the north end of St. Anne's, the largest of a chain of small islands which form the south-east side of the harbour, and came to anchor about four miles from Port Victoria.

Mr. Geoffrey Nevill (well known as a conchologist, and who had come from Mauritius with me in order to collect the shells and plants of these islands) and I soon after went on shore with Mr. Swinburne Ward, the Civil Commissioner, who had come off to the steamer, and landed at the jetty.

The town of Port Victoria is peculiar; the streets, which extend along the sea-wall, are simply well-made broad footpaths, separating the different "compounds" of the inhabitants. These must be a great improvement on the old muddy tracks, overgrown with weeds and encumbered with stones, which existed before Mr. Ward's reign. Most of the houses are mere wooden boxes, each standing in its own dirty enclosure or "compound."

Through the middle of the town, down a narrow valley, a small stream flows to the sea from the foot of the Trois Frères, a mountain immediately behind the town. During the hurricane I before mentioned, a great landslip occurred near its source, and, sweeping down the narrow channel, brought an avalanche of earth and mud, with enormous rocks and trees, upon the houses by its side, overwhelming some, overturning others, and causing a frightful loss of life and property: for days dead bodies were being dug out from the mass, and many known to be lost were never recovered.

A similar landslip occurred at the same time about a mile to the south-east, bearing down on a house and carrying some of the unfortunate inhabitants even out to sea, and there burying them below high-water mark in mud of the consistency of hasty-pudding. The same hurricane blew down many cocoa-nut trees and destroyed provision-grounds, and, it is said, killed a great many birds. It was not, however, without its good effects, as it showed the necessity for widening the bed of the stream, clearing the paths of the stones and weeds which encumbered them, and giving a proper outlet for the waters. All these works have now been done. By passing a law compelling the inhabitants to contribute either money or labour for making roads, these necessary works for the prosperity of a community are being rapidly pushed on by Mr. Ward, and probably by this time a good road has been completed from Victoria to Anse Nord-Ouest (North-west Bay) on the opposite side, and another for some seven miles along the south-east coast. With the increasing cocoa-nut plantations and the great improvement in the town and neighbourhood, Mahé may be considered to be in a most prosperous condition; and if there were only a little more energy in its inhabitants, it would soon become a very valuable possession.

My first few days at Mahé were employed in investigating the immediate vicinity of Port Victoria. I was much struck with the scarcity of fine flowering shrubs or plants, though this was the season of the north-west monsoon, the summer of Seychelles. Insect-life, too, was very scarce: during the whole month I was there I did not see three dozen individual butterflies; and Mr. Nevill, who caught every one he could, did not succeed in getting specimens of more than four species during that time. At night the stillness was unlike the tropics, hardly a cricket or *Cicada* to be heard; and one might have fancied one's self in Europe, so silent were the hours of darkness. Bird-life also was very scarce, both in species and individuals. Formerly birds were much commoner, said the Creoles, but have decreased owing to the ravages of rats, and cats and dogs which have taken to the bush. The "Pie chanteuse," which used to be familiar at most places, was said now to be extinct at Mahé*, and only to be found in reduced numbers at Praslin, Aride, and Marianne. The "Pigeon hollandais," I was told, became yearly rarer. The "Cateau vert," from the constant persecution against it brought on by its unfortunate partiality for ripe maize, was said to be nearly exterminated, and the "Cateau noir" only now to be found at Praslin.

Mr. Ward had kindly procured me a few live birds for the Zoological Society, and amongst them was the "Cateau noir" from Praslin; this bird is now alive in the Society's Gardens. He had also three skins of the "Cateau vert" killed at

---

* On my voyage home, however, I was told by a naval officer, who had been at the south end of the island, they were still to be found there.

Mahé. Both these species were new; and I described them at the Meeting of the Zoological Society on the 28th of March, naming the first *Coracopsis barklyi** in honour of Sir Henry Barkly, the Governor of Mauritius, and the second *Palæornis wardi* † to commemorate the donor.

The "Mangeur des poules" (*Tinnunculus gracilis*) I found to be tolerably common, but I never saw it very far from the sea; I had been told before I visited the islands that it fed chiefly on small shrimps, but in none of those I dissected did I find any. Lizards appear to be its principal food. I was told it only ate the eyes of its victims; but in several instances I found the entire animals had been eaten. The species, I fear, will soon become extinct: it is an exceedingly tame and foolish bird; and even after one has been fired at and missed, it will only fly a few yards and settle again. It affects the cocoa-nut groves, perching either on the branches of the tree or on the nuts, and I have no doubt generally breeds in these trees, though I was informed it did so in rocks as well, especially on the island of St. Anne.

The "Colibri" (*Nectarinia dussumieri*) I found to be very common; I saw it at Mahé, Praslin, Ladigue, Félicité, Marianne, and Silhouette. When I first arrived, the males I shot did not show any yellow under the wing; but at Marianne, on 12th February, I obtained two males which had the bright flame-coloured axillary tuft fully developed. At first I thought these were of a different species; but on my return to Praslin and Mahé, and shooting several specimens, I found that all the males had then assumed their full plumage, which they evidently had not done when I shot my first specimen on the 25th January. The axillary tufts, so far as my experience goes, are not visible in the living bird, the feathers of the breast covering them entirely; and I never observed them as Mr. Tristram did those of the allied species, *N. osea* (Ibis, 1865, p. 74), when the bird was singing. In habits the *Nectariniæ* resemble the *Certhiolæ* more than any other group with which I am acquainted —always restless, hanging head downwards to get at an insect on the under surface of a leaf, then flying off to a flower (not darting like a Humming-bird), and back again to the same tree. The male constantly sings from the top of a tree or from a dead and exposed branch. The song is hurried, but not unlike that of a Goldfinch. The ordinary call is one note quickly repeated three or four times. Mr. Nevill had two nests brought to him, one containing a young one almost fully fledged, the other an egg; the nests were exactly like others of the family which have been described (Ibis, 1863, p. 302, and 1865, p. 76). The egg is greenish white-freckled, suffused and blotched with umber-brown chiefly at the larger end. It is ·75 inch in length, and ·41 in breadth.

---

* CORACOPSIS BARKLYI.

Coracopsis C. comorensi colorem admodum similis sed valde minor.

Descr. maris adulti.—Brunneo-niger, remigibus rectricibusque saturatioribus ardesiaco tinctis; rostro, cera pedibusque nigro-fuscis.

Long. tota circa 13, alæ 8·1, caudæ 6, acrotarsi 0·76, dig. med. sine ungue 1, hallucis sine ungue 0·48, maxillæ a fronte 0·95, ejusdem a rictu 0·95, mandibulæ 1·37 poll. Angl.

Fœmina mari similis sed minor.

† PALÆORNIS WARDI.

Palæornis P. alexandri similis sed rostro robustiore; fasciis humeralibus phœniceo-rubris, nucha sine fascia rubra.

Descr. adulti.—Pileo et gula cærulescentibus, genis ochraceo-viridibus, torque perignathico nigro a rictu ad nucham ducente; dorso alisque gramineo-viridibus; uropygio vividiore; singulis fasciis latis humeralibus phœniceo-rubris; remigibus et rectricibus saturate viridibus cæruleo lavatis, his subtus flavescentibus, fuscis illis; gastræo flavescenti-viridi; rostro vivide coccineo, apice pallidiore; pedibus fuscis.

Long. tota circa 16, alæ 7·75, caudæ 9, acrotarsi 0·75, dig. med. sine ungue 0·95, hallucis sine ungue 0·5, maxillæ a fronte 1·4, ejusdem a rictu 1·15, mandibulæ ab articulo 1·4 poll. Angl.

Fœmina vel *mas junior* mari adulto simillimus, sed coloribus obscurioribus.

The commonest bird in Mahé is the "Martin" (*Acridotheres tristis*), introduced from Mauritius, and now nearly as abundant as it is there. It may have been a successful rival to the "Pie chanteuse," and in the struggle for existence helped the cats and rats to exterminate it in this part of the island. It is said not to thrive on all the islands.

"Tourterelle" (*Geopelia striata*), also introduced from Mauritius, is very common and tame; I saw it all over the lower parts of the island I visited.

The snow-white "Goeland" (*Gygis candida*) is always to be seen flying round the clumps of badamier trees (*Terminalia*), on the horizontal branches of which, without constructing any nest, it deposits its single egg—chasing one another and playing, generally three in the party, the young one and the two parents, for some minutes—and then retiring to rest in the shade, all three sitting in a row, a very happy family. On the day I arrived, I saw one sitting very tamely in a badamier tree close to Government House, and at about fifteen feet from the ground; on going immediately under her, I could see she was sitting on an egg, which was placed near the fork of two horizontal and nearly parallel branches, without any nest, so that the egg lay on the branches, between which it was visible from beneath; the egg would have hatched in a few days. On the 22nd of February I got another egg from the same spot, probably the produce of the same bird. The young are as white as their parents.

These four birds, and also a species of Swift, of what species I am uncertain, may be seen constantly in the immediate neighbourhood of the town; but to see any others it is necessary to go further into the island.

On the 26th January, while walking by the side of a small marsh at the Anse Nord-Ouest, I saw and shot two small Bitterns. These birds apparently are the same as specimens in the British Museum labelled as the *Ardeola lepida*, Horsf., from Java. Why this species should have found its way across the Indian Ocean, and have skipped Ceylon and other places, is more than I can say. It is quite different from the Madagascar species, *A. podiceps*, and from the European *A. minuta*. I was informed that it made its nest in bushes and laid white eggs. So far as I could learn, the species was nowhere numerous throughout the islands. In the same marsh I hunted in vain for "Poules d'eau," which were said to be numerous; but I never was fortunate enough to meet with one there, and I am therefore ignorant of the species. This same afternoon, close to the town and on the sands, I shot a Plover (*Ægialites geoffroyi*) and a Stint (*Tringa minuta*), both of which species were common, and, while I was there, of daily occurrence.

On the 28th we went to the Forêt Niol. We first crossed over the low ridge at the foot of the Trois Frères, descended towards Anse Nord-Ouest, and, turning to the left, went up the side of the mountain, through tall grass which almost reached to the top of our heads, ascending several very steep places, until we were about 1000 feet above the sea. Here we found pine-apples growing in abundance; these our men peeled, and, holding them by the crown, gnawed them as an English countryman would a turnip. Bushels upon bushels might have been gathered in a very few minutes: nothing but the rats appears to contend with man for them; and as the pines are probably more numerous than the rats, there are plenty left for men's use. Going up, hardly a bird was seen save the "Goelands" flying round the badamiers below, and a few "Colibris" and "Martins." It is curious that on the island of Mahé there does not appear at present to be existing a single indigenous species of the large family of *Fringillidæ* or *Ploceidæ*. There are grasses enough, one would have thought, to maintain a good many grain-eaters, but their seeds remain undevoured by any bird. We soon crossed over a narrow ridge, and on descending we discovered a small flock of what I at once saw would turn out to be a new species of *Zosterops*. Contrary, however, to the usual habit of the genus, these were, as the Creoles say, "beaucoup farouches," and, keeping in a low bush with thick foliage, I had an ineffectual shot, and they flew away. At the same place we came across some "Merles." I had heard of the existence of this species, and, now that I got it, I felt pretty sure, from the yellow tinge on the breast and the much larger beak, it was distinct from the Mauritius, Réunion, and Madagascar forms of the genus with which I was acquainted; and a comparison with numerous specimens of these convinced me I was right. I have described it under the name of *Hypsipetes crassirostris**. Going a little further up the mountain, we

---

* Hypsipetes crassirostris: vulgo "Merle."

Hypsipetes H. olivaceo admodum similis sed rostro valde robustiore, gula, pectore abdomineque flavescentibus.

Descr. maris adulti.—Supra fuscus, nonnihil ad olivaceum vergens, pileo nigro; subtus gula pectoreque cinereis flavo tinctis, abdomine albido-flavescente; remigibus rectricibusque fuscis, quibusdam secundariis externe rufis; rostro sordide aurantiaco; pedibus fusco-flavis, unguibus nigris, iridibus fusco-rubris.

Long. tota 10·75, alæ 5·3, caudæ 4·5, acrotarsi 1·05, dig. med. sine ungue 0·8, hallucis sine ungue 0·5, maxillæ a fronte 1·1, ejusdem a rictu passed through a grove of clove-trees, evidently planted by the hand of man, as this tree is not indigenous in Seychelles; and a little further on we entered the forest. There were few large trees, the forest having been destroyed, I am informed, by a fire which raged over this part of the island about ten years ago. The old "capucins" were all dead, their white stems only remaining; the tree-ferns, of only one species, were of no great height; neither were the two species of palms; and there was nothing very striking in the general appearance of the bush, which can hardly be dignified by the name of forest. The only birds to be seen or heard were a few "Merles" and "Paille-en-queues" (*Phaeton flavirostris*) soaring overhead. In going up I had observed one of the latter enter a hole in the stump of a dead capucin, about a quarter of a mile off, and on returning I made for it. After a scramble over dead wood and granite boulders, I got to it. The hole was about fifteen feet from the ground, and my man soon ascended, not, however, without fears on my part that the rotten old stem would come down with his weight. Unfortunately there was only a young bird inside it; this I took home and endeavoured to rear, but it only lived four days. I afterwards saw several "Pigeons hollandais" (*Erythrœna pulcherrima*), and shot one.

The next morning I went up the side of the mountain directly at the back of the town to the height of about 500 feet, and on a sort of plateau I fell in again with a flock of the *Zosterops*. They were tolerably plentiful in a grove of clove-trees, incessantly in motion, following one another from tree to tree as restless as Titmice. Their only note was a sharp one; and though, from their appearance on dissection, they would soon have bred, they did not sing. This species also proved to be new, and I have described it under the name of *Z. modesta** from its very

---

1·25, mandibulæ ab articulo 1·81; rostri altitudo ad frontem 0·41 poll. Angl.

Descr. fœminæ adultæ.—Mari similis sed minor, secundariis omnino fuscis, et rectricibus albo terminatis; rostro vivide aurantiaco; pedibus flavis. *Junioris* (*masc.?*) rostrum fuscum, pedes brunneo-flavi sunt.

* ZOSTEROPS MODESTA.

Z. obscure fusco-grisea, annulo periophthalmico niveo, loris nigris.

Descr. maris adulti.—Supra olivaceo-grisea, subtus fusco-murina; hypoplain appearance. This morning, too, close by the same place, I saw a male *Foudia madagascariensis*, evidently introduced; I saw this species afterwards near the same place. My Creole servant, who was with me, did not know either of these birds, but thought that the *Zosterops* was a female "Colibri," and the "Cardinal" he had never seen before. I also shot a young *Turtur picturatus*, and saw another one. This bird is called "Pigeon" or "Tourterelle rouge," and was introduced, it is said, some few years ago by a late Inspector of Police. It is not very common, and I saw it nowhere else. On my return by the sea-shore, I saw a Greenshank (*Totanus glottis*) and a Sandpiper (*Actitis hypoleucus*).

On the 31st I got a specimen of the large "Corbijeu," which does not appear to me to differ from the ordinary *Numenius arcuatus*. These birds are generally very wild and difficult to approach, and require a gun-cartridge to bring them down. They are not nearly so common as their congener *N. phæopus*.

The weather for the next few days was bad, with heavy squalls of wind, as is common during this monsoon; and we were out but little. I got some more specimens of *Zosterops modesta*, and was surprised to find that the males were sometimes smaller than the females. I had not observed this peculiarity in others of the genus.

On one of these evenings, when the weather was finer, I went out in the bay, with Mr. Ward, to spear fish by torchlight; this amusement, when fish are abundant, I have no doubt is a most exciting one. The mode of operation is to go in a large canoe, the spearsmen sitting in the bow, each armed with various sorts of harpoons or fish-spears; amidships two men stand up, holding aloft dead branches of cocoanut-trees lighted, these are renewed as they are burnt out, to the great detriment of the hats, clothes, and whiskers of the expectant fishermen, a shower

---

chondriis brunneo tinctis, annulo periophthalmico niveo, loris nigris; remigibus rectricibusque fuscis, illis externe griseo limbatis, et interne albido marginatis; rostro griseo; pedibus obscure plumbeis.

Long. tota circa 4·8, alæ 2·3, acrotarsi 0·72, dig. med. sine ungue 0·46, hallucis sine ungue 0·3, maxillæ a fronte 0·41, ejusdem a rictu 0·58, mandibulæ ab articulo 0·95 poll. Angl.

Fœmina mari omnino similis.

of sparks falling on to them during the whole operation if the men are unskilful. A third man, in the stern, quietly pushes the canoe along with a pole. The sport was not very diverting to me the night we were out, as, with the exception of small needle-fish, a foot long, I did not see anything to strike at, and not a fish was caught, as the sea was not sufficiently calm; at the same time the light of the torches reflected on the coral only some two or three feet beneath the surface (as you always fish in very shallow water) was beautiful, having the appearance of a very rough snow-field, and I have no doubt that if there had been no ripple the effect would have been still more striking.

The weather on the 5th February having improved, and the wind being steady from the north-west, we determined to make a start for Praslin and Curieuse, where the double cocoa-nut (*Lodoicea sechellarum*) * grows, and the islands in their neighbourhood. Dr. Brooks, the Government Medical Officer, kindly lent us his boat, a large one of about seven tons and yawl-rigged, in which we left Mahé at 10 o'clock in the morning of the 6th, and at 4 in the afternoon ran on to the beach of Anse Marie-Louise, at the east end of Praslin, where we were most hospitably received by Mr. Campbell, an ex-whaler, and his wife, a Creole of Ladigue, at his house, situated in a luxuriant grove of common cocoa-nut. The distance from Mahé to Praslin is about twenty-five miles, and we fetched the south-east point of the island in one tack. I did not see many birds but the common *Haliplana panayensis*, Shearwaters, Tropic-birds, and a few Boobies.

Praslin is about seven and a half miles long by three wide in its broadest part, having an interrupted belt of marsh along the coast of from fifty to a hundred yards wide, usually covered with *Hibiscus* and other plants; and then the land rises immediately, forming a continuous chain of hills from 1000 to 1500 feet in height throughout its length. It is not nearly so rocky as any of the other islands I visited. The coast is almost entirely fringed with groves of cocoa-nuts growing between the sea and the marshes. The hills are not thickly wooded, the "Cèdre"

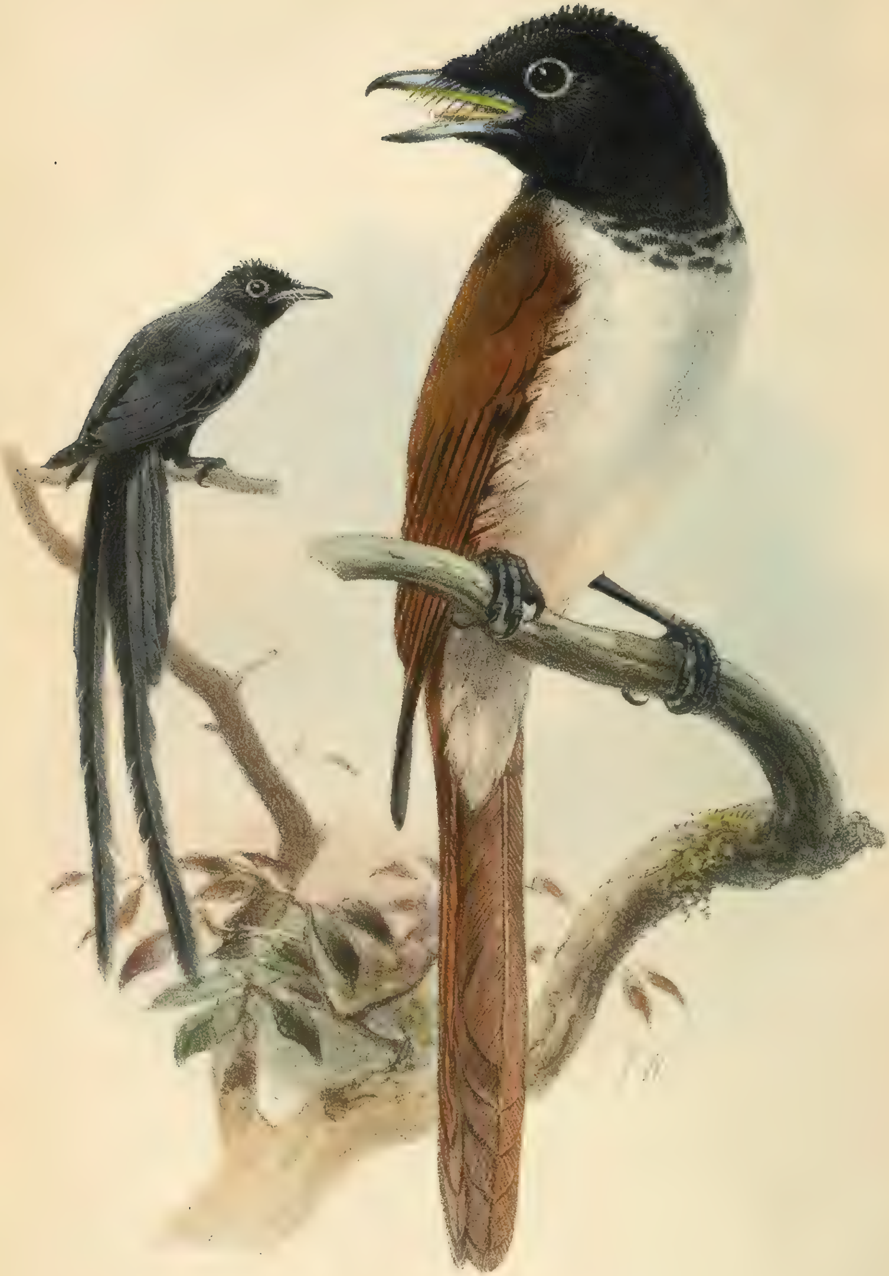
---

* An interesting account of this curious palm is given by Mr. Swinburne Ward in the Journal of the Linnean Society, (Botany) vol. viii. pp. 135–139.

(*Casuarinus*) and the double cocoa-nut being perhaps the commonest, and there is but little undergrowth. The former is usually of no great age, the island being so frequently devastated by fire, but occasionally on the beach very large ones may be seen. One I saw, which had been uprooted by the hurricane of 1862, must have been over 100 feet in height, and at 12 feet from the ground its diameter over 7 feet, and with a clear run, without a branch, of 50 feet. The double cocoa-nut is still plentiful in some parts, particularly on the south-east end of the island, the windward side. On the north-east, it has been almost extirpated, this being the lee side during the south-east monsoon, when the fires chiefly rage. The male tree frequently grows to 100 feet in height, the female to 60 or 70. We had heard so much of their beauty that I confess to disappointment. On every adult tree four or five dead yellow leaves hang down against the trunk; and the living leaves standing up much straighter than is usual with palms, the former are exposed to plain view. The trees, too, seldom grow sufficiently near one another to afford mutual protection, and the ends of the leaves are always much withered and split by the wind. These causes give the tree a ragged and untidy appearance; and it will not bear comparison in beauty with the graceful cocoa-nut or with many species of the lofty cabbage-palm.

My first inquiries of Mr. Campbell were for the "Pie chanteuse;" he told me that a few years ago one was constantly about his house, but that it had been killed by one of his cats, and he had not seen one since in that part of the island. He said the bird was gradually getting scarcer and scarcer, owing to the ravages of the wild and tame cats, but that there were still a few to be found on both coasts, about the middle of the island.

After our arrival we took a short stroll up the hills to the east of Mr. Campbell's house, to look at the double cocoa-nuts. We saw but few species of birds. The "Merle" (*Hypsipetes crassirostris*) was very numerous; two or three "Mangeurs des poules" were chasing one another round a dead cèdre; an occasional "Tourterelle" flew from the ground as we walked, and one or two "Colibris" flew past our path, and we heard "Cateaux



J Wolf lith

M&N Hanhart imp.

TCHITREA CORVINA.

noirs" whistling far away. We were astonished to see several large flying foxes (*Pteropus*), though it wanted an hour to sunset, sailing over head to a grove of mangoes below. These beasts are quite diurnal, and evidently can see perfectly in daylight, as it is very rarely that they will then approach within gunshot. At night, however, they will fly within a few feet of a man's head, and many are killed with long poles as they fly round the fruit-trees.

The following morning we went along the coast on the north-east of the island, and in a swamp came upon a small colony of "Veuves," where I succeeded in shooting three males in full plumage. I only saw one brown-coloured example, but did not get a shot at it. They are the most pugnacious birds I ever saw, constantly chasing one another and fighting. These also prove to belong to a new species, which I have described as *corvina** (Plate IV.). We were disappointed in not seeing more birds.

In the afternoon I went over the hill to the westward, and near a piece of maize, then ripe, I saw several "Cateaux noirs," and the "Pigeon hollandais." The Parrots were too cunning to give me a fair shot, and they kept sitting above a hundred yards off on the tops of the "cèdres," enjoying the evening sun and whistling pleasantly. I waited till sundown, but it was of no avail; they were not very hungry and did not care to risk coming down to eat. The next morning we crossed over the same place, and I shot two males and a female, all in the most wretched plumage, just moulting, so that their feathers came off on merely handling them; I might have shot some more, but all that I saw were in the same ragged state. We then descended to the sea and walked along the shore for some two miles, sometimes for a

* TCHITREA CORVINA.

T. major: *mas adultus* omnino chalybeo-niger, mediis rectricibus longissimis.

Fœmina et mas juvenis capite chalybeo-nigro; corpore supra castaneo, subtus albo; remigibus fuscis, externe castaneo limbatis.

Descr. maris vestitu nuptiali.—Unicolor, chalybeo-niger ut *Corvus*, rostro pedibusque nigris.

Long. tota (rectricibus mediis exceptis) circa 8·75, alæ 3·45, caudæ 11·5 (!), acrotarsi 0·75, dig. med. sine ungue 0·5, hallucis sine ungue 3·5, maxillæ a fronte 0·53, ejusdem a rictu 0·99, mandibulæ ab articulo 1·35 poll. Angl.

quarter of a mile up to our middle in the sea to avoid the rocks which jut out below high water. Besides sea-birds nothing particular was to be seen; and about 11 o'clock, having shot three Whimbrels, we stopped for breakfast, as we found a fisherman's hut whence our men could borrow pots and pans. One of the men returning from foraging told me he had heard a "Pie" about half a mile further on; and after breakfast we again started, proceeding to the Protestant church and school, where an intelligent youth told me, in fair French, that the "Pie" was not uncommon at this spot in the early morning and in the afternoon, but that they did not sing or show themselves during the middle of the day. We went on about a quarter of a mile further to where there was a splendid grove of cocoa-nuts, one or two very fine badamiers, and a few cèdres; and there we stayed till it was time to return home, without hearing or seeing a single "Pie." When about halfway back, however, I heard a very plaintive whistle, and my man at once exclaimed "Pie, Pie!" and I soon saw the bird hopping about in a large badamier, where I shot it. It proved to be a male, and some people living near said there was also a female about; but we did not see her. We got to Mr. Campbell's after dark, and had some little trouble to scramble down the steep side of the hill at the back of his house in the dusky light.

On the 10th February we started early, and walked some three miles till we were nearly opposite to Curieuse, a small island situated about a mile from the coast of Praslin. On our way we passed the place where I had before shot the "Veuves;" and I killed one in brown plumage, which, on dissection, proved to be a male. I also saw a "Pie," which I missed.

Formerly all the lepers from Mauritius and its dependencies were sent to Curieuse; but of late years the practice has been discontinued, and now there were only three of these unfortunates and a few old decrepit paupers from Mahé and the other islands. These people are under the care of Mr. George Forbes, who has resided there for many years. We reached the island in a pirogue, which was rowed by our own men, the narrow strait which divides it from Praslin being only a mile wide. At the present time there are very few double cocoa-nuts left, but the old hard "bowls"* in which the trees stood are plentiful nearly all over the island. I was told by Mr. Forbes that the "Pie chanteuse" never visited his island, and that very few land-birds were ever found there. About eighteen months ago, three Flamingoes, probably *Phœnicopterus minor*, appeared. They were apparently young birds, and being very tame they were killed by the fishermen and eaten.

I saw a pair of *Dromas ardeola*, called there "Cavalier," and killed one. In their habits, as far as I saw, they were as unlike a Tern as they possibly could be; and the sternum of the one I shot shows no more affinity to that genus than that of any other Plover does. I consequently cannot agree with Messrs. Blyth and Layard and Professor Schlegel in classing it with the Terns. I was told by Mr. Forbes that the species was not uncommon, but that seldom more than two or three were observed together. The other birds I saw on the island were *Nectarinia dussumieri*, *Tinnunculus gracilis*, *Strepsilas interpres*, *Totanus glottis*, and *Ardea atricapilla*.

Returning across the strait, a heavy squall suddenly came down from Praslin, with sheets of rain and very violent gusts of wind, which raised a considerable sea before we landed at Praslin. On walking back through a young cocoa-nut grove, with the trees about twelve or fifteen feet high, some Whimbrels afforded very pretty shooting, and I got three of them. I often observed them perched on the topmost branches of dead cèdres.

On the 11th we started for the islands of Félicité and Marianne, where we were told we should find an abundance of birds. We first stopped at Ladigue, about two miles and a half distant, where I wished to see the owner of Marianne; and I very much regretted that I had not time to make a longer visit, as I feel sure, from the well-wooded appearance of this beautiful island, several species must be found there. I saw one "Pie;" and I was told they were not uncommon there, but that rats and cats abound.

At about half-past ten A.M. we landed at Félicité. This small rock is the property of the Mauritius Government; and a great part of the timber used in the public works in Seychelles is brought thence. The only inhabitants are the guardian (a Creole Indian of Mauritius) and his wife, and three or four men whom he employs in the cultivation of maize and rice. With a very considerable forest on the south-west side, one would naturally suppose animal life would be abundant; but I walked nearly round the island immediately on my arrival, and the only land-birds I saw or heard were the Colibris and some "Poules marronnes," the domestic fowls which have run wild and bred in some numbers all over the island. On the top of the island, which may be perhaps 1000 feet high, there are said to be some Arabic inscriptions. Though I visited this spot I did not discover them. In the afternoon a sudden squall with thunder and lightning raised a heavy surf on Marianne, and our boatman declined risking his boat in it; so there was nothing left but to sleep at Félicité—a great waste of time, as neither of us had a single thing to do in the evening.

---

* *Vide* Mr. Ward's paper already mentioned.

The next morning as soon as our boat was launched and laden, we sailed for Marianne, ran easily through the pass in the reef, and landed about a quarter past eight. Marianne is only about a mile and a half in length by half a mile in breadth, and its height, I should judge, not more than 400 or 500 feet. On the north side it is tolerably wooded, but, I should imagine, not with any very large trees; altogether from the sea it looked but a poor place for a naturalist. On landing, however, our ideas were soon changed: as many notes of birds were to be heard as on a fine May day in the eastern counties of England. On walking up to the guardian's house, situated about one hundred yards from the landing-place, in a clump of badamier and tamarind trees, I saw several "Pies," and in twenty minutes I had got as many birds as would occupy me best part of the day in skinning them.

The "Pie chanteuse" is the boldest and most familiar bird I ever saw. It will approach within a few feet, and when sitting on a branch of a tree will allow itself to be knocked down with a stick as one was while I was there, by a man whom we brought with us. They are also said to enter houses.

They feed on the ground as well as among bushes and trees. The gizzards of those I skinned contained remains of small millepedes and beetles, and in one a small lizard; so that it will not be the want of food which will exterminate these birds. In habits they reminded me of a Stonechat or a Redstart, constantly jerking their tails and sitting with them erected and wings drooping. There is no apparent difference in the sexes; one bird I obtained, which was evidently young, had some slight reddish-brown markings on the white upper wing-coverts. The note of the bird (I suppose of the male) is exceedingly pleasant; but it cannot, so far as my experience went, be called a song, being only a succession of low soft notes, something between the low notes of a Redbreast and the soft ones of the Common Linnet.

These soft notes are chiefly heard in the morning and evening. They commenced even before daybreak, when the moon and stars were shining, every tree seeming to contain one bird or more.

On one of the rafters in the house in which we slept, I was shown a nest, which I was assured a "Pie" had built some few months ago, but had deserted. The bird had gained entrance to the house through a hole in a plank of the wall. The nest was a great straggling heap of dead skeleton leaves some seven or eight inches in diameter, but I could not make out what its shape was when complete. I was told they also bred in crannies in rocks. From their appearance I should imagine their breeding-season would not occur for some months.

The young birds are often taken from the nests, but are seldom reared, and when reared still more seldom live for any length of time. The type example (Ibis, 1865, p. 331), which lived for some two or three months in the aviary of Lady Barkly at Mauritius, apparently died from a disease of the lungs, the temperate climate of Réduit, 800 feet above the sea, probably being too cold for it.

The next bird which claimed my attention was the "Mangeur du riz." I had heard of this species before, and expected to find it a hard-billed bird. It proved to be new, and I have described it as *Foudia sechellarum**. All the examples I saw (and I must have seen between fifty and a hundred) were in the same dull plumage. I have but little doubt that the male in breeding-plumage would assume a yellow dress. In habits these birds are gregarious, and, I should imagine, live chiefly on grass-seeds; they are said also, as their name implies, to eat rice. The proprietor of Marianne told me the species was also found at Ladigue, but was not plentiful there. I also shot some "Colibris," which I at the time thought, as stated before, were of a different species from those in the other islands.

---

* FOUDIA SECHELLARUM.

F. fusco-brunnea, fronte, occipite et mento aureo tinctis (vestitu hiemali).

While I was skinning these birds Mr. Nevill went out with my gun, and returned shortly with examples of the "Tourterelle rouge," "Pigeon hollandais," and "Serin." The "Tourterelle rouge" I was pleased to find was not, as I had been led to expect, *Turtur picturatus*, its larger bill and broader white bar on the under surface of the tail showing it to be a different species; and I had hoped it would be new, but I subsequently found it to be the *T. rostratus* of Bonaparte (Consp. Av. ii. p. 62). The woodcuts of the head and wing of this bird, and of those of *T. picturatus*, will show the great difference between the two, and it is interesting to see the shortened wing of the island form.

The "Serin" proved to be a second new species of *Zosterops*, which I have called *Z. semiflava**. Mr. Nevill saw a flock of

---

Descr. maris adulti vestitu hiemali.—Supra fusco-brunnea, fronte occipiteque aureo tinctis, nucha olivacente; capitis lateribus olivaceis; subtus pallidior, mento et gula flavescentibus; remigibus rectricibusque fuscis olivaceo limbatis; rostro nigro; pedibus fuscis.

Mas juvenis vel fœmina aureo caret colore in fronte et mento, aliter colores vividiores præsertim in remigum marginibus habet; rostro pedibusque hepaticis.

Long. tota circa 4·9, alæ 2·95, caudæ 2·1, acrotarsi 0·85, dig. med. sine ungue 0·52, hallucis sine ungue 0·41, maxillæ a fronte 0·67, mandibulæ ab articulo 0·98 poll. Angl.

* ZOSTEROPS SEMIFLAVA.

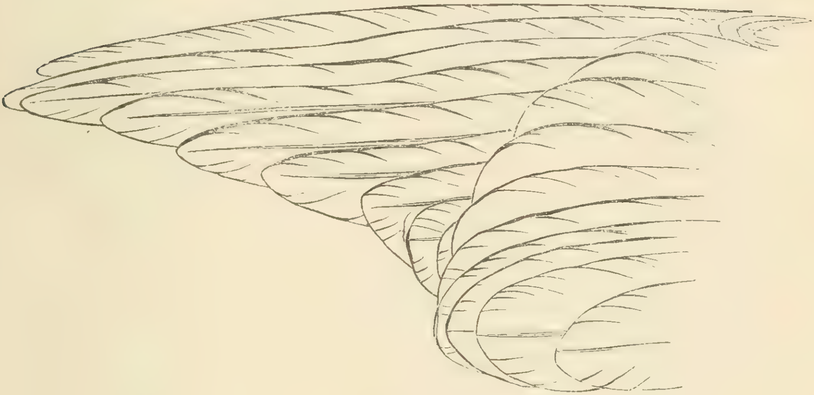
Zosterops Z. poliogastræ (Heuglin, Ibis, 1861, p. 357, pl. xlii.) simillima, sed epigastro abdomineque omnino flavis, et hypochondriis badiis.

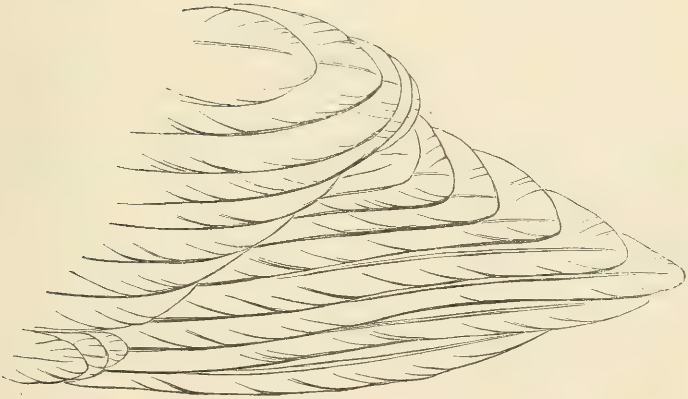
Descr. maris adulti.—Supra flavo-olivacea, uropygio flavo; subtus flava, hyponchondriis badiis; annulo periophthalmico niveo; remigibus rectricibusque atro-fuscis, illis externe flavo limbatis et interne albido late marginatis; rostro pedibusque plumbeis.

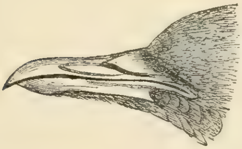
Long. tota circa 4·3, alæ 2·28, caudæ 1·85, acrotarsi 0·75, dig. med. sine ungue 0·39, hallucis sine ungue 0·3, maxillæ a fronte 0·47, ejusdem a rictu 0·64, mandibulæ ab articulo 0·92 poll. Angl.

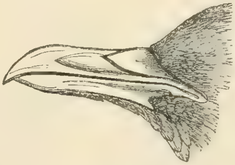
Fœmina mari similis.

some dozen or so, from which he killed a couple. I was too busy to go out again on this day, and so I did not see the









species alive. I was told that this bird was also found at Ladigue, Praslin, and Silhouette. I am pretty certain I saw it once at Mahé, but did not succeed in getting a shot at it.

The "Pigeon hollandais" of Marianne was of course *Erythrœna pulcherrima*. The "Merle" and "Mangeur des Poules" appeared to be identical with the Mahé species. I was told that the "Cateau noir" was formerly numerous, but that it had been exterminated on account of its depredations on the maize-crops.

The next morning I took a short walk to try and get some more *Zosterops*, but I could not find one; the only bird I did get was a young "Tourterelle rouge." Unfortunately I had no more dust-shot with me; and though I should have much liked to have obtained some more birds, it was impossible; and we left Marianne. After a tedious voyage, for we had to beat all the way against a chopping sea, we reached Praslin soon after noon.

The information I had received as to there being no cats or rats at Marianne was confirmed by the proprietor, M. Choppy, and by the guardian, who had resided there for about three years; and it is only to their absence that I can ascribe the great abundance of bird-life on this little island, and to their presence the entire destitution of bird-life at Félicité, which, to all appearance, would afford more food than its sister island Marianne, situated not two miles distant. Long, then, may the latter be catless and ratless! M. Choppy, to his honour be it said, has forbidden a single one of the former animals to be introduced by any of his people; and it is to be hoped that his orders may be obeyed. If, however, the whole of the island is cleared for the purpose of planting cocoa-nut trees, as is the intention of M. Choppy, I fear their introduction will be almost as destructive to the birds as the introduction of cats and rats. We saw a large species of lizard which was extremely common at Marianne; and we obtained several, which I left behind with Mr. Nevill. We also saw it at Praslin. I may mention that the human population of Marianne consists of one family of five or six persons.

Having at last procured a female "Veuve" at Praslin, at the same spot where I had procured the others, and seen that a nest of the species I previously found was still without eggs, we left on the afternoon of the 14th, and had a pleasant run in the whaler over to Mahé, where we arrived late in the evening.

Being anxious to visit Silhouette, we were lucky in finding

M. Baillon, the manager of the cocoa-nut plantation there, then at Mahé; and, by appointment, we met him on the morning of the 17th at Anse Nord-Ouest, where he had two whale-boats in readiness, and at about 8 o'clock we embarked. As the wind was dead ahead, there was nothing for it but to pull the whole way; and right well did our two crews pull for four hours and a half against a head-sea and strong breeze and current, only stopping to rest once for about five minutes. The distance is over twelve miles.

Silhouette is one large mass of granite rising very abruptly from the sea to the height, I should judge, of over 2000 feet. In many places there are acres of bare rock; in others there is sufficient soil for forest, which is being gradually cut away for the introduction of cocoa-nut trees. The cocoa-nuts are now planted more than halfway up the mountain, and it is probable that in ten years none of the native forest will remain. The produce last year exceeded £6000 in value, and will shortly be doubled. The whole island is the property of one person.

We remained at Silhouette a couple of days, most comfortably entertained by M. and Mdme. Baillon; and here we saw the "Cateau vert" at the edge of the forest, in a place some 600 or 700 feet high, where was a patch of maize; but they had been so often fired at that they would not come within shot. I saw also a few "Mangeurs des poules," "Colibris," "Pigeons hollandais," but could not see a single "Serin;" and, indeed, M. Baillon assured me it did not exist there.

The "Tourterelle" and "Martin" have been introduced; the latter, I was told, about twenty years ago, and it is now very common.

With the exception of a narrow belt of sand along the coast, now planted with luxuriant cocoa-nuts, the island of Silhouette is the most difficult place to get about I ever was at. The sides of the mountain, when they are not solid masses of rock, are strewed with enormous blocks from six to thirty feet square, over or round which you have to make your way, very often over them; so that a few hundred yards in a straight direction may take almost as many minutes to accomplish, and I have no wish ever to attempt another walk up the mountain.

In the evenings, there being a bright moon, we saw many flying foxes round some trees close to M. Baillon's house. I also saw them sailing about several times during the hottest part of the day. We were told that a species of snake was very common here, but we failed to get it.

On the 19th we returned to Mahé and remained for the night at the house of M. Leflecher, near Cape Ternay, where I again had the opportunity of enjoying the excellent hospitality of the Seychellois. At this place we were told that snakes were not uncommon. The next morning we walked up an exceedingly pretty valley at the foot of the Morne Blanc and across the ridge about 1800 feet, and descended to the eastward of Port Victoria, which we reached the same evening.

The next few days I spent in packing up, as the steamer was due on the 23rd. I got, however, three live "Poules d'eau" from Denis Island, some seventy miles to the northward, which, after various vicissitudes, safely reached the Zoological Gardens, and appear to be our common *Gallinula chloropus*.

In the early morning of the 24th the mail came in, and before sunrise I was on my way to Aden.

In concluding this paper, I must offer my warmest thanks to Mr. Swinburne Ward for his hospitality and his information on various subjects of natural history, and to Mr. Gould, Mr. George Gray, and Mr. Sclater for their assistance in helping me to determine the several species I brought home with me. I trust that Dr. Wright, now on a visit to the archipelago, will not only be successful in his own particular line of natural history, but will also contribute some further information on their ornithology, as I feel no doubt that other species of birds remain to be discovered, many parts of Mahé and Ladigue not having been worked by me at all, and the sea-birds having been almost entirely neglected.

In the subjoined List of Seychelles birds, a "¶" is prefixed to the names of those species which I have every reason to believe are peculiar to the islands, and a "‡" to the names of those which have been introduced.

¶Tinnunculus gracilis (*Lesson*). "Mangeur des poules."
Falco an Circus? "Papangue" (said to occur in bad weather).
¶Coracopsis barklyi, *nobis*. "Cateau noir."
¶Palæornis wardi, *nobis*. "Cateau vert."
Collocalia francica (*Gm.*)? "Hirondelle."
¶Nectarinia dussumieri, *Hartl.* "Colibri."
¶Zosterops modesta, *nobis*.
¶—— semiflava, *nobis*. "Serin."
¶Tchitrea corvina, *nobis*. "Veuve."
¶Copsychus sechellarum, *A. Newton*. "Pie chanteuse."
¶Hypsipetes crassirostris, *nobis*. "Merle."
¶Foudia sechellarum, *nobis*. "Mangeur du riz."
‡—— madagascariensis (*L.*).
‡Acridotheres tristis (*L.*). "Martin."
¶Erythrœna pulcherrima. "Pigeon hollandais."
¶Turtur rostratus, *Bp.* "Tourterelle rouge."
‡—— picturatus (*Temm.*).
‡Geopelia striata (*L.*). "Tourterelle."
‡Francolinus an Coturnix?
Ægialites geoffroyi (*Wagl.*).
Squatarola helvetica (*L.*).
Strepsilas interpres (*L.*).
Dromas ardeola, *Payk.* "Cavalier."
Numenius arcuatus (*L.*). "Corbijeu."
—— phæopus (*L.*). "Corbijeu."
Totanus glottis (*L.*).
Actitis hypoleuca (*L.*). "Alouette."
Tringa minuta, *Leisl.*
Ardea atricapilla, *Afzel.* "Gasse."
Ardeola lepida (*Horsf.*). "Manik."
Gallinula chloropus (*L.*)? "Poule d'eau."
Phœnicopterus minor?
Anas an Dendrocygna? (in bad weather).
Puffinus chlororhynchus, *Less.*? "Fouquet."
—— obscurus (*Gm.*)? "Fouquet."
Sterna velox, *Rüpp.*?
Sternula ——?
Haliplana panayensis (*Gm.*).
Anous ——?
Phaeton flavirostris, *Brandt.*
Tachypetes ——?
Sula ——? "Fou."
—— ——? "Capucin."

The following table shows the distribution of the peculiar species among the principal islands of the group:—

	Mahé.	Silhouette.	Praslin.	Curieuse.	Aride.	Ladigue.	Félicité.	Marianne.
Tinnunculus gracilis	*	*	*	*	....	....	....	*
Coracopsis barklyi	?	?	*					
Palæornis wardi	*	*	?					
Nectarinia dussumieri	*	*	*	*	....	*	*	*
Zosterops modesta	*							
—— semiflava	?	....	?	....	....	?	....	*
Tchitrea corvina	....	....	*					
Copsychus sechellarum	?	....	*	....	?	*	?	*
Hypsipetes crassirostris	*	*	*	....	....	....	....	*
Foudia sechellarum	....	....	....	....	....	?	....	*
Erythrœna pulcherrima	*	*	*	....	....	....	....	*
Turtur rostratus	....	....	....	....	....	....	....	*

Of the genera to which these peculiar species belong, one, *Tinnunculus*, is cosmopolitan, and a second, *Turtur*, widely distributed in the Old World. Four, *Palæornis*, *Nectarinia*, *Zosterops*, and *Tchitrea*, are well represented on the African and Indian continents, not to go further, as well as in the Mascarene Islands or Madagascar. *Copsychus* and *Hypsipetes* occur in India and Madagascar, but not in Africa. *Foudia* is found in Africa, Madagascar, and the Mascarene Islands, but not in India, while *Coracopsis* is a genus hitherto thought to be confined to Madagascar and the Comoros. *Erythrœna* is the only form peculiar to the Seychelles; but I am much inclined to doubt its claim to generic rank, though not to the extent of Prof. Schlegel (N. T. D. iii. p. 88), who would refer it to *Ptilopus*; and I should place its only repesentative with *Columba madagascariensis*, Linn., and *C. nitidissima*, Scop., in the genus *Alectrœnas*, which Mr. G. R. Gray established to receive the last-named species. In this aspect, then, *Alectrœnas* will range with *Coracopsis*.

These few remarks will serve to show the natural affinities of the Ornis of the Seychelles. Its Malagash tendency is evident; for it contains, so far as known, no good genus which is not also found either in Madagascar or the Mascarene Islands. But I forbear from entering into any speculations as to its derivation, in confidence that future investigators will throw more light on this interesting subject.

XX.—*On the Ornithology of Palestine.*

Part VI.

By the Rev. H. B. Tristram, M.A., F.L.S., C.M.Z.S.

(Plate VII.)

(Continued from p. 97.)

The family of the *Muscicapidæ* is barely represented in Palestine, scantily in species, and no less sparsely in individuals. Even the well-known East-European species, *Muscicapa collaris*, Bechs., and *Erythrosterna parva* (Bechs.), escaped our notice, though we may certainly presume on their presence, extending as they do from Europe to Asia Minor, and thence into Persia, as mentioned by De Filippi (' Viaggio,' p. 346). *Muscicapa luctuosa* is a summer resident, first noticed by us in Galilee on April 23rd ; but though remaining to breed, it is a very scarce bird. Our common Flycatcher, *Butalis grisola,* was first obtained on the same day, but continued to arrive for three days in great numbers, remaining to breed in all parts of the country, its favourite nesting-places being in the branches of gnarled old trees overhanging the paths. In my journal of May 11th I noted seeing at Safed, in an olive-yard, what I felt sure was a male *M. collaris*; but I did not obtain it.

Although the mosquitoes enjoy comparative immunity from the attacks of this most useful group of gnat-catchers, the *Hirundinidæ* are indefatigable in making up for the deficiency. The Oriental Chimney-Swallow (*Hirundo cahirica,* Licht.) remains the whole year, and is found both on the coast (in the maritime plains) and throughout the length of the Jordan valley. No one can observe this bird in the Holy Land without being satisfied of its distinctness from *H. rustica.* It is true we can give no other diagnosis than the difference of coloration on the lower parts, these being chestnut instead of white or brownish-white; but of the hundreds of swallows of both sexes to be seen throughout the winter, not one of the common sort could be detected. There is neither fading nor intensifying of the chestnut lower plumage at any time of the year. Specimens shot at all seasons are precisely similar. In spring their numbers rapidly increase; and from the middle of March they become distributed over the whole country, the higher as well as the lower grounds, while along with them appear many of our common species. In the higher grounds, these, perhaps, predominate; in the lower certainly the *H. cahirica* is most numerous. I never could detect the two sorts interbreeding, though the nests and eggs are precisely similar. Having no chimneys provided for them, rafters of outhouses, where such can be found, but especially ledges in caves, are the favourite nesting-places; and I took five nests of the *H. cahirica* attached to little projecting stones under the vaulted roof of a well in constant use, about two feet from the ground, and built in a row. Convenient situations must have been scarce there (it was near Kedesh); for we had to stoop under the roof to draw water, and almost touched the nests with our heads as we withdrew.

Very distinct is that charming bird *H. rufula*, Temm., belonging to a different group containing eight old-world species, which has been separated by Bonaparte into a subgenus *Cecropis*. This bird does not return to Palestine till the end of March. We obtained our first specimens on the 28th. It then scatters itself over the whole country, and in the warmer and more marshy regions is the predominant species. It is a beautiful bird on the wing, showing its chestnut collar and rump to great advantage as it turns continually, flying much more slowly than the common Swallow, and beating repeatedly over a more limited extent of ground. Though feeding in flocks, I never knew this swallow to breed in company; and very rarely were two nests to be found in one cave. The nest is a beautiful structure, composed of the same materials as that of the House-Martin, but is invariably attached to the flat surface of the underside of the roof of a cave or vault. It is of the shape of a retort, with a bulb of the size of a Thrush's nest, large and roomy, the neck or passage for entrance being sometimes a foot or more in length. The inside of the clay chamber is warmly lined with feathers. Laborious as must be the construction of this elaborate edifice, the little architects are very fastidious, and frequently desert two or three half-finished nests in succession, commencing a new one in the same cavern. But after all they are sadly bullied. So tempting a domicile invites unscrupulous vagrants; the Galilean Swift (*Cypselus affinis*) assumes the rights and wrongs of the compound householder and exercises the franchise of the nest, leaving the Swallow to pay the rates. The Swift contracts the entrance by a casement of feathers and gelatinous secretion, and then bids defiance to the original landlord. Mr. Simpson found the Syrian Nuthatch indulging in similar acts of lawlessness in Greece. When so treated the Swallow does not leave the cave, but humbly sets to work to construct a new nest not far off. A favourite breeding-place of *H. rufula* is under the arches of the corridors of the Monastery on Mount Carmel. The eggs are four in number, pure white, considerably larger than those of the House Martin, and flatter at the small end.

Strange confusion has occurred in the nomenclature of *H. rufula*. Some English writers, among whom is Mr. Newman, appear to identify it with *H. cahirica,* and talk of the dark rufous or chestnut of its lower parts! Dr. Bree has erroneously blended it with *H. daurica*, an Eastern representative species; while Temminck and Degland have each helped to make confusion worse confounded. An examination of specimens is all that is required to clear up these repeated blunders, which one author has copied from another.

Of the genus *Cotyle* three species occur in Palestine. *C. riparia,* our Sand-Martin, though it swarms in Egypt all winter and breeds on the Nile in February, only returns to the Holy Land at the end of March, and then in small colonies, there being very few localities suited to its habits.

C. rupestris, the well-known Rock-Martin of Southern Europe, resides in all the glens of Palestine throughout the year, not often in large numbers, though in the Jordan valley it is numerous enough to be decidedly gregarious, as it is also in the gorge of the Litany River. It appears indifferent to climate and season. It is a singularly sombre-looking bird on the wing, its sooty uniform being only occasionally relieved by the display of the white spots on some of the inner rectrices. It breeds early in March, in inaccessible clefts, and its eggs are spotted like those of the House-Swallow, thus differing from the whole group with which it is classed, excepting the next species.

Cotyle palustris, hitherto supposed to belong to Abyssinia and the Upper Nile, we found throughout the year in the Jordan valley, consorting, to the *north* of the Dead Sea, with the last species, while round its shores it holds undisputed possession. The two birds breed in the same locality, in the clefts of Mount Quarantania, near Jericho. In appearance and form it exactly resembles *C. rupestris,* only being of a much lighter hue, a very pale ashen-grey, and one-third less; so that they can be instantly discriminated on the wing. They have the same note and flight; but, while the other bird confines itself to the gorges, this may often be seen skimming the surface of the wide salt-flats and sand-spits of the Dead Sea. It particularly affects the neighbourhood of Jebel Usdum, the salt-mountain, where it breeds. I possess only one egg, marked exactly like, but considerably smaller than that of the common Swallow.

The House-Martin, *Chelidon urbica,* is the last of the Swallow tribe to return to Palestine. It reappears in small numbers about April 5th, and breeds in colonies on the sheltered faces of cliffs in the valleys of Northern Galilee.

The Golden Oriole, *Oriolus galbula,* is rather a bird of passage than a summer resident. Numbers of these splendid birds were to be seen for a fortnight from the middle of May; but they rapidly disappeared, nor did I ever meet with the nest, though twice in June I found pairs of Orioles evidently settled down in their breeding-habitat.

The Shrikes are amongst the most conspicuous and abundant genera in the country; in fact they soon become a perfect nuisance to the collector, whether in the way of skins or eggs. The most common species is our own *Lanius excubitor,* which resides all the year in every part of the country, and omits no opportunity of exhibiting both himself and his nest. His favourite perch in winter is the outermost bough of some bare prickly shrub; and when approached he simply flits to the outside of the next bush. He builds his great nest, well defended by thorns from the attacks of Hawks, in the middle of a jujube-tree, long before the leaves are out. I have taken eggs incubated in the middle of March. While the female is sitting, her mate chooses the most conspicuous perch close by, and by his manner invites a scrutiny. But he is bold and daring; and I have seen him beat off the Green Lizard, that pest of small nestlings. Generally, however, the prickly bush is sufficient to turn even a Lizard. So tame will the Grey Shrike become that after a few days a pair of them regularly frequented our camp for the sake of the morsels thrown outside the tent during the occupation of skinning, and in securing their dainties they behaved with all the coolness of London Sparrows. The Southern Shrike, *L. meridionalis,* can be discriminated at a glance by its dark back. It does not reside in the country, but early returns from its migration, breeding exactly in the same way as the former, but about a month or a fortnight later. It is comparatively scarce, and confined to the southern parts of the country. Both species appear frequently to have a second brood. Curiously enough, the Rosy Shrike, *L. minor,* which I obtained in the Plain of Sharon in 1858, and which has been mentioned by several writers among the birds of the country, did not come under our observation on our recent visit. Nor did we detect *Telephonus tschagra,* so common in Algeria and Tunis.

Of the other Shrikes, the Redbacked *Enneoctonus collurio* is most abundant on the high grounds of Hermon and Lebanon, where it supplants all the other species, but only in summer, as it returns in May; and we obtained the eggs as late as June 20th. On the 16th May Mr. Bartlett and I took ten nests of eggs in one forenoon near Lake Phiala on Hermon.

Lanius rufus, the Woodchat, is also a migrant, returning the last week in March, and after that time to be seen on every bush up to an altitude of 4000 feet. Above this it does not ascend, its place being taken by the Red-backed Shrike. But it also breeds as plentifully in the seething glens of the Dead Sea as on the bleak hills of Samaria. Its nest, though much neater and more compact, is not less conspicuous than that of the Grey Shrike. It is lined with some uniform material, generally the soft flower-tufts of some composite plant. Once I found one near a village, lined entirely with the cotton threads of a piece of stocking evidently pulled to pieces by the bird itself. It appears never to employ wool or hair in Palestine. The eggs are subject to the same variations as those of *E. collurio,* though they run less brilliant and more greenish.

The most attractive of the Palestine Shrikes is the little *L. nubicus,* Licht., another migrant, returning about the 20th March. Compared with its congeners it is a shy, retiring bird, preferring the inside of the bushes to the bare exposed twigs for its perch, and generally concealing itself in the leafy thickets. It is very quiet, and seldom seen on the wing; but in flight the contrast of its white and black plumage and rufous under parts has a brilliant effect. The nest is remarkably neat, like that of the Chaffinch, but of course wider and shallower, placed on a branch or fork, lined with fine roots and fibres. The eggs, four or five in number, though Shrike-like, have a distinct character, the ground being generally olive, and the spots always arranged more or less in a zone near the broad end. They can scarcely be mistaken for those of any other bird. The Masked Shrike is confined to the upper and wooded portions of the country.

In commencing this series of papers with an account of the peculiar denizens of the basin of the Dead Sea, I omitted one of the most remarkable of the whole, the Grackle of the glens, *Amydrus tristrami*, Sclater, well known to travellers as the Blackbird of Marsaba, where many pairs are retained in a state of semidomestication by the monks. Though so circumscribed in its habitat, it is a bird of great power of wing, closely resembling the Starling in its flight, and extremely wary and wild. But in its power of voice it is unsurpassed by any bird I ever heard, and, from descriptions, seems to rival that of the Bell-bird. has no varied notes, but a rich musical roll of two or three notes of amazing power and sweetness, which makes the cliffs ring again with its music. It lives in the most desolate ravines, in small bands of from four or five to a dozen, feeding at dawn and sunset. We frequently saw birds passing and repassing from their nests, which were in inaccessible chinks many hundred feet up the cliffs, and hopeless of access. At length, in the gorge of the Kedron, one of our Arabs found a nest accessible, but the cleft was so narrow, and the nest so many feet in, that the discovery was useless. I afterwards found a nest in a softer and shallower hole, near Ain Feshkhah; but the brood was fledged, leaving only the fragments of some pale blue eggs, like those of the Indian Grackles. The glossy black of the plumage of the male is resplendent in the sunlight, while the russet wings shine like burnished copper. The female, though similar in markings, is without this metallic lustre. This bird is peculiarly interesting as belonging to a distinctly Ethiopian type, but is quite a peculiar species; and, unlike the other peculiar species of the district, there are no geographical links to be traced in Egypt or elsewhere to unite it with its South-African relations. We have, however, no lists of the birds of Petra or of Sinai, by which we might trace its southward range. It has been admirably figured by Mr. Gould in his 'Birds of Asia.'

The Starling is only a winter migrant, visiting the Plain of

Sharon in tens of thousands, with a few of the Sardinian Starling (*Sturnus unicolor*) intermingled. This latter does not, as in Algeria, remain behind to breed. The Starlings all depart at the end of February.

The Rose-coloured Pastor is not even a winter visitant, but occasionally appears in vast flocks. It is well known to the natives as the Locust-bird, from its habit of preying on that destructive creature, whose flights it generally follows. We found it in 1858, but not in 1864. It has been known to breed in large colonies in Palestine, but not for many years past. So at Smyrna numbers of nests were taken in 1858, while since that year it has rarely been seen there. The behaviour of the Pastor in Syria reminds us of that of the Waxwing further north, an erratic rather than a migratory bird.

The Buntings are fully represented in Palestine. *Emberiza miliaria* is as common as the Skylark in England on all the corn-plains throughout the yesr. The lovely little *E. striolata* confines itself throughout the year to the nooks by the Dead Sea, and to the southward, where its hitherto unknown egg remains to be discovered by some future adventurous collector. The Yellow-Ammer, though found at Constantinople, does not extend so far south, nor *Emberiza cirlus* so far east. We looked out in vain for *Emberiza cinerea*, Strickl. *E. aureola* I once saw, and do not think I could be mistaken, as I watched the bird for some time, but had no gun with me. An Italian gentleman also showed me a specimen he had shot north of the Lebanon. The Ortolan, *E. hortulana,* is very abundant in the upper country in spring, returning to breed about the first or second week in April. But a fortnight earlier comes the *Emberiza cæsia,* Cretschm., which takes the place of the Yellow-Ammer in Palestine. Its return is sudden and universal, and it peoples every part of the country from the banks of the Jordan to the high parts of Lebanon. It builds either on the ground under a tuft, or in a low bush. Its note is low but cheery; often repeated, like the Ortolan's, from the top of a bush or low tree. The nest is very neat and compact, lined with fibres and horsehair; and the eggs, four in number, are sufficiently characteristic to render them distinguishable from those of any other Bunting. They are russet- or reddish-brown in their ground, covered with spots and blotches rather than with streaks, after the fashion of those of the Ortolan. While the Ortolan prefers the olive-yards and gardens, *E. cæsia* confines itself to the bare hill-sides and the scrub, or to the rocky wadys.

Emberiza cia, certainly not a *Meadow*-Bunting in Palestine, we found only on the tops of the hills and in the highest parts of Lebanon, both in summer and winter. Unlike the others, it does not seem to migrate. We several times found its nest among rocks in Lebanon towards the end of June. The eggs are clay-coloured, covered with fine lines chiefly round the broad end, very distinct from any other Bunting's I ever saw, and certainly different from the varieties of the Yellow-Ammer's, which do duty for the eggs of this bird in most collections. Its note is very like that of the Yellow-Ammer, but more lugubrious and long-drawn, uttered generally from the top of a flat rock, its favourite perch.

The so-called Black-headed Bunting, *Euspiza melanocephala,* has nothing in its habits and appearance to recal the true *Emberizinæ.* It is a very common and conspicuous bird in spring and summer. I was in error in stating (P. Z. S. 1864, p. 446) that it returns in April. On reference to my note-book I find I did not observe it before the first week in May; and its plumage is too brilliant for it easily to escape notice. Its note is varied and powerful, more like a Linnet's than a Bunting's; and it resorts both to scrub, forests, and cultivated ground, affecting particularly olive-yards and, in the north, apricot-orchards, where it sits pouring forth its varied song from the topmost twig of some tall tree. The nest is placed either on the ground in a tuft, or in a low bush, sometimes in the clump at the root of a shrub. The nest is more compact than that of most Buntings, lined with fibres of roots and hair; and the eggs, often six in number, are of a pale blue, powdered all over their surface, sometimes thickly, sometimes sparsely, with brown spots. It is strange to find Brehm quoted as stating its egg to be like those of other Buntings. We may observe that its American congener, *Euspiza americana,* lays a plain blue egg. Everything I have observed in *E. melanocephala* disposes me to believe that Bonaparte is right in removing *Euspiza* from the Buntings and classing it with the subfamily *Spizinæ*.

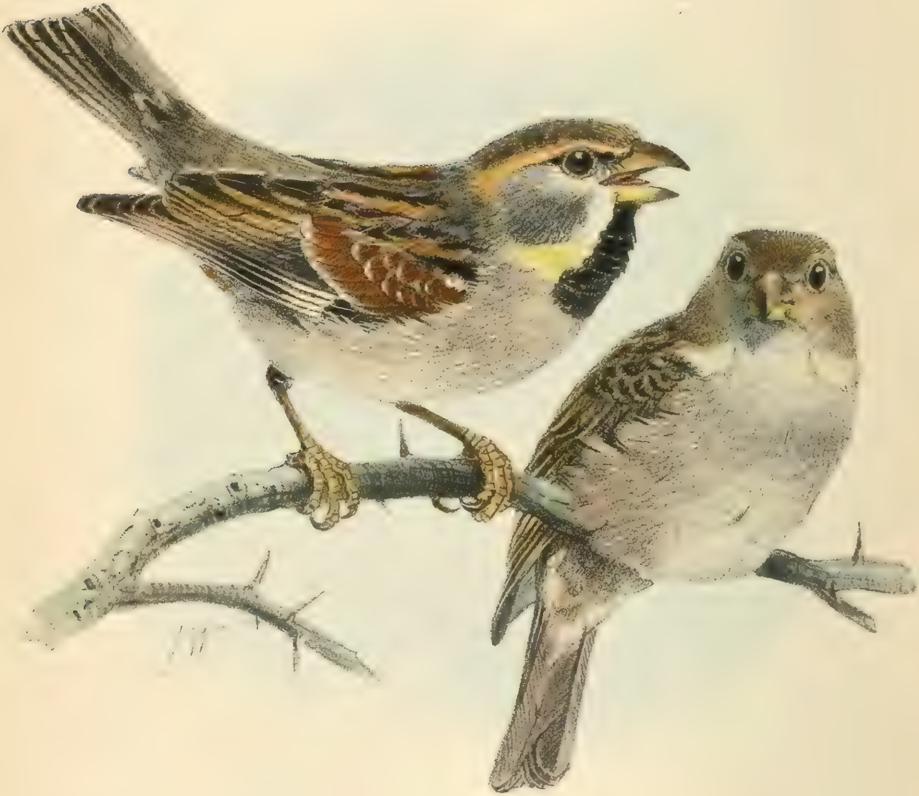
We now come to the Finches, represented in Palestine by eighteen species, two if not three of these peculiar to the country. The common Hawfinch (*Coccothraustes vulgaris*) was only once noticed by us, and that in Gilead, the woods and glades of which are admirably adapted for its habits. The Chaffinch, *Fringilla cœlebs,* is very common in winter on the maritime plains and among the southern hills, congregating in flocks, the sexes apart, the male flocks appearing greatly to exceed the female in number. Early in spring they all disappear, and return to the highest parts of Lebanon, where they breed abundantly in May and June, among the mulberry-groves of Hazrun and Ehden. We found them very plentiful as high as the Cedars, and in the trees of the famous grove we took several nests. The Chaffinch of Syria is identical with our own, and shows no modification of plumage whatever; nor does it at all approach the Algerian Chaffinch, *Fringilla spodiogena.* The common Chaffinch also extends to Persia, according to De Filippi. Thus the modifications of the form are all westward and southward, not eastward.

The Sparrow of the Syrian cities is our own *Passer domesticus,* which in his westward migrations has acquired neither additional impudence, assurance, nor voracity. All these qualities are possessed in their pristine perfection by the Syrian, which has also the same ash-coloured head. But in the interior, in certain wooded and country districts, not in the cities, he has adopted a chestnut turban, and become *P. cisalpinus*; and who shall say that this is not a good specific difference in a land where Jew, Turk, and Christian, are always discriminated by the colour of their head-dresses? May not the chestnut-headed Sparrows be the relics of aboriginal orthodoxy expelled to nooks and corners? I am, however, sceptic enough to doubt this plausible argument, and I hope in some future number of 'The Ibis' to give my reasons for uniting these Sparrows, or ascribing a dash of impure blood to the Cisalpine variety.

I have no such doubts about *Passer salicarius,* a bird clearly distinct in its habits, as well as in the invariable chestnut head and spotted flanks. The Marsh-Sparrow is in Palestine confined chiefly to the Ghor, or Jordan valley, where it congregates at all times of the year in countless myriads, breeding in colonies so crowded that I have seen the jujube-trees absolutely broken down under the weight of their nests; while their noise is so deafening that it is impossible to carry on conversation in their "rookeries." I have known their eggs brought in by thousands, but I never saw any variety approaching the dark varieties of the egg of the Common Sparrow. This bird, like the Doves, feeds largely on the leaves of leguminous plants. It is also found in moist wooded districts in other parts of the country, though not in such vast numbers as in the Ghor; but it never becomes a denizen of the towns.

The most interesting species of the genus is the *Passer moabiticus*, Tristr. (P. Z. S. 1864, p. 169), a bird very restricted in its habitat. We never met with it at the north end of the Dead Sea, not even in the oasis of Jericho, nor in the rich plains of Shittim on the eastern side. We first discovered it at the west side of the Dead Sea, at Ain Terabeh, among the reeds which in a dense mass overhang the sea and the many brackish springs which there flow into it. We caught a glimpse of a few at the south-western end of the sea, among the reeds of Wady um Bagkek; and again on the east side, in the Ghor es Safieh, it was plentiful. It is exceedingly shy and wary, and was most difficult either to see, or, when shot, to retrieve. It lives in small flocks, and is extremely restless, feeding on the seeds of the great feathery *Donax*. The chirp was like that of the common Sparrow; and till we saw it, we took it for *P. salicarius*, which also inhabits the same spot. Its bright chestnut back, diminutive size (one-third less than that of the Tree-Sparrow), and the bright yellow on each shoulder at once marked it as distinct. Yet it bears no resemblance to the *Passer flavicollis* of India except in size. The yellow spots, though pale, are conspicuous in the female also, which in other respects is dressed in the sombre garb of the female of the common House-Sparrow. It is interesting to note that while the *P. flavicollis* of India shows a parallelism to the *Petronia stulta* in the yellow spot on the breast, *P. moabiticus* has the spot on each shoulder; and the nearest congener of *P. stulta*, *P. brachydactyla*, has no spot at all.

Ibis.1867. Pl VII



Wolf lith.

M & N Hanhart imp

PASSER MOABITICUS

For convenience of reference I append from the 'Proceedings' the description of this species*, and avail myself of Mr. Wolf's pencil to present the readers with figures of it (Plate VII.).

XXI.—*Recent Ornithological Publications.*

1. English.

The Eighteenth Part of Mr. Gould's 'Birds of Asia,' published 1st April 1866, contains figures of the following species:—

Sypheotides auritus. India.
Actinodura egertoni. India.
—— nipalensis. India.
Spizixus canifrons. Sylhet (?).
—— semitorques. China.
Thaumalea picta. North China.
—— amherstiæ. Cochin China (?); Thibet.
Phlogœnas cruenta. Philippine Isl.
Phlogænas crinigera. Sooloo Isl.
Henicurus maculatus. W. Himalaya.
—— guttatus (sp.n.). E. Himalaya.
—— sinensis (sp.n.). China.
—— scouleri. Himalaya.
Hirundo filifera. India.
Rhodophila melanoleuca. India.
Pratincola leucura. India.

Only six specimens of the beautiful *Thaumalia amherstiæ* are, according to Mr. Gould, known. Of these, two are in the British Museum, two at Paris, one in the Derby Museum at Liverpool, and the remaining one belongs to the family of the late Lady Amherst. The female has never been recognized. *Phlogænas crinigera* is the species which was some time since described as *P. bartletti* (P. Z. S. 1863, p. 377, and 1864, pp. 238–240). Mr. Gould, we must observe, spells the name of the genus *Henicurus*, without the aspirate, *Enicurus*, following indeed the example of its founder Temminck, but one that seems to us "more honoured in the breach than in the observance." The two species above indicated as new were first described in the Zoological 'Proceedings' for 1865 (pp. 664, 665); but Mr. Gould alters the specific name of the second from *sinensis*, under which it originally appeared, to the less classically correct *chinensis,* which we cannot account a change for the better.

---

* "Ex cinereo isabellinus, tectricibus alarum læte castaneis. superciliis et dorso medio cum remigum et rectricum marginibus rufescenti-isabellinis: dorso medio nigro striato: gutture medio cum cervice nigris: macula suboculari et gutturis vitta utrinque laterali albis: macula cervicali utrinque flava: ventre albo, crisso rufescente: rostro superiore plumbeo, inferiore cum pedibus flavis.

"Long. tota 3·8, alæ 2·3, caudæ 1·8 poll. Angl."—*P. Z. S.* 1864. pp. 169–170.

The Second and Third Parts of 'Exotic Ornithology'* fully sustain the high reputation of its authors. The birds figured in it are as follows:—

Part II.

Phlogopsis macleanni, *Lawrence.*
Cinclocerthia ruficauda (*Gould*).
—— macrorhyncha, *Sclater.*
—— gutturalis (*Lafresnaye*).
Accipiter ventralis, *Sclater.*
—— chionogaster (*Kaup*).
Rupicola sanguinolenta, *Gould.*
Porzana rubra, *Scl. & Salv.*

Part III.

Accipiter erythrocnemis (*Kaup*).
—— castanilius, *Bp.*
Cichlopsis leucogonys, *Cab.*
Nyctibius bracteatus, *Gould.*
Cyphorhinus lawrencii, *Sclater.*
—— phæocephalus, *Sclater.*
Troglodytes solstitialis, *Sclater.*
—— brunneicollis, *Sclater.*
Icteris pustulatus, *Wagl.*

The colouring of the Plates shows that very great care has paid to them. The letterpress, as might be expected, contains all the information available. Our friends the authors have done well, we consider, in figuring these American species of *Accipiter,* the nomenclature of which is involved in the greatest confusion. We hope to see the whole subject cleared in a future Number in a complete synopsis of the genus. As in the case of the First Part of this work, which we noticed before (*supra,* p. 123), all the subjects now illustrated belong to the New World.

That veteran Scandinavian sportsman, Mr. Lloyd, has published a third work on his favourite subject†, which contains much that will interest some of our readers. The book is profusely illustrated, a few of the woodcuts being drawn by Mr. Wolf, and of course excellent; but the majority of the chromo-lithographs, after designs by M. Körner, an artist well known in London, are not so successful. Some of them, we think, we have seen before; and though there is perhaps no particular objection to meeting with an old friend a second time, yet Mr. Yarrell has already introduced us to M. Körner's delineations of the Racklehane, Riporre, and sterile Tjäderhöna, acknowledging his obligations to Prof. Nilsson's work—a slight mark of courtesy which it would have been easy for Mr. Lloyd to have imitated.

---

* Exotic Ornithology, by Philip Lutley Sclater, M.A. &c., and Osbert Salvin, M.A. &c. Parts II. & III. Jan. 1st, May 1st, 1867. London, imp. 4to.

† 'The Game Birds and Wild Fowl of Sweden and Norway,' &c. Embellished with a map, 48 illustrations executed in chromo-lithography, and 65 woodcuts. By L. Lloyd, author of 'Field Sports of the North of Europe,' and 'Scandinavian Adventures.' London, 1867. Royal 8vo, pp. 599.

The queen of the Scottish lakes must often have been visited by ornithologists, but until lately we did not know of any one of them having tarried to catalogue its birds. Mr. Robert Gray, of Glasgow, whose intended work on the Ornithology of Western Scotland we announced in our last number (*supra*, p. 256), in 1864 contributed a "List of the Birds of Loch Lomond" to Keddie's 'Guidebook,' whence we obtain an idea of the avifauna of that beautiful neighbourhood. Only one hundred and eleven species, however, are enumerated, of which none are very remarkable. It is perhaps worthy of notice here that *Sterna dougalli*, which has entirely disappeared from the islands in the Firth of Clyde, where it was originally discovered, still breeds on Inch Moin, where we are delighted to hear it is afforded protection by the proprietor.

The eastern coast of Scotland, we are pleased to find, still possesses some observant ornithologists, as is testified by a little work *, of which we owe a copy to the kindness of a friend. If they will but continue their labours, we are sure they will find that Haddingtonshire or East-Lothian contains within its borders nearly as many species, two hundred and thirty-five in number, as have hitherto been mustered with the assistance of the adjoining shires, and some little help from beyond Forth; for no one who regards its position on the map can fail to see that it is most favourably situated as a landing-place for stray birds. It is rather curious that *Podiceps auritus* (auctt. *nec* Linn.; *P.*

---

* 'The Birds of East-Lothian and a portion of the adjoining counties.' By William P. Turnbull. Glasgow, printed for private circulation, 1867. Royal 8vo, pp. 48.

nigricollis, Gmel.) should be apparently a regular winter visitant on the coast near Dunbar; for that species has certainly a more southern range than *P. cornutus* (Temm.; *P. auritus*, Linn.). The value of the recorded occurrence of *Ectopistes migratorius* in Scotland forty-two years ago may be appreciated by the fact that a gentleman in Berwickshire liberated several Passenger Pigeons not long since, and his example may have been anticipated by some early votary of acclimatization.

In a paper read before the Wiltshire Natural History Society in September 1865, but only just published*, Mr. A. C. Smith calls attention to the remarkable theory as to the colouring of Cuckoos' eggs, enunciated first by Dr. Baldamus, and more than two years since made known to our readers by Mr. G. D. Rowley (Ibis, 1865, pp. 178–186). Mr. Smith, however, we think does not state Dr. Baldamus's opinion with accuracy. The only sense in which it can be said that the Cuckoo "is able to assimilate them [her own eggs] in colour to the eggs of those birds whose nests she selects" is that the Cuckoo, having laid an egg, searches for the nest of a bird containing eggs of a similar colour in which to deposit it; and the truth of this may well be doubted. Dr. Baldamus never alleged, so far as we are aware, that the Cuckoo had any power of laying an egg of what colour she pleased. Granting the facts as the Doctor has stated them, there may well be other explanations of them without assigning to the Cuckoo an undue amount of intelligence. A Darwinian would perhaps say that there is a probability of each Cuckoo most commonly laying its eggs in the nest of the same species of bird, and of this habit being hereditary. By the ordinary operation of natural selection, then, the case would come in time to be as Dr. Baldamus has affirmed it to be. But leaving the cloud-land of theories, our readers may like to know that the long-presumed opinion of the Cuckoo first laying her egg on the ground and then carrying it off for deposition in the nest of some other bird, has of late been singularly confirmed by actual observation. In the German periodical 'Der Zoologische Garten' for 1866 (pp. 374, 375) appears a note by Herr G. Brucklacher, stating that the author watched a *Cuculus canorus* through a telescope, saw her lay an egg on the grass, take it in her bill, and deposit it in the nest of a *Motacilla alba*!

---

* 'On certain Peculiarities in the Life-History of the Cuckoo, more especially with reference to the Colouring of its Eggs.' By the Rev. A. C. Smith. 8vo. pp. 16. (Extract from the 'Wiltshire Magazine.')

2. DUTCH.

We regret to say that the excellent Catalogue of the Leyden Museum makes but slow progress. In our number for October 1865 (Ibis, 1865, p. 533), we noticed its seventh Part; and since then we have only received one other, which completes the *Ralli* and gets more than halfway through the *Anseres**. The former are represented in the collection by 708 skins and 42 osteological specimens of 40 species. We observe that Prof. Schlegel refuses to recognize the specific validity of Mr. Sclater's *Plectropterus rueppelli* (P. Z. S. 1859, p. 131, pl. cliii., and 1860, pp. 38–42) as distinguished from *P. gambensis*, remarking that "nos individus de l'Afrique orientale [which should be *P. rueppelli*] présentent précisément les caractères que Mr. Sclater assignés à son *Anser gambensis*, c'est-à-dire à l'oiseau de l'Afrique occidentale." There may possibly be a mistake somewhere as to the locality whence the two birds come; but of their specific distinctness we feel assured. Will any of our readers inform us to which of the two species the specimens killed in Great Britain belong? One, which was killed in Cornwall in 1821, and was the subject of Bewick's figure, is in the Museum at Newcastle-on-Tyne; the other, which was killed near Banff in 1855 (Naturalist, 1855, p. 181) is, according to Yarrell (B. B. 3rd Ed. iii. p.   ), in the possession of Mr. Smurthwaite, of Richmond, Yorkshire.

Heer J. P. van Wickevoort Crommelin has obligingly sent us copies of three papers communicated by him to the 'Archives Néerlandaises' for the present year. The first of these is "Sur le *Circus æquipar*," the name by which Cuvier is said to have previously designated the bird called in 1830, by Sir Andrew

---

* Muséum d'Histoire Naturelle des Pays-Bas, 8me livraison. Leyden, 1866. (London, Williams and Norgate.)

Smith, *C. swainsoni*. The Cuvierian name seems not to have been published, however, until 1848; and if so, we cannot recognize its claim to our regard. This paper gives a very concise and complete account of the species, so far as yet known; and the author has certainly been at no small pains in compiling it, a task to which he has apparently been led by the recent occurrence in Holland, near Nordwijk, of a female example. The second paper enters as thoroughly into the history of *Phalaropus hyperboreus*, which, curiously enough, does not seem ever to have been met with in that country (although stated by Temminck to appear there accidentally) until last autumn. The third article is "Sur le *Procellaria leucorhoa*" [recte '*leucorrhoa*'], by which name Vieillot, in 1817, seems to have designated the species now well known as Leach's Petrel. We hope the author, who sets an excellent example to other naturalists in his careful collation of the most recent records, will continue this series of monographs as occasions arise; they cannot fail to be as highly useful to others as they are creditable to himself.

3. American.

Mr. Elliot's great work* makes satisfactory progress. Three more Parts have appeared, containing figures of *Cathartes burrovianus*, *Sphyrapicus thyroideus*, *Bucephala islandica*, *Podasocys montanus*, *Chen albatus*, *Podiceps californicus*, *Ægiothus exilipes*, *Chloephaga canagica*, *Passerculus alaudinus*, *Phaleris tretracula*, *Ptychorhamphus aleuticus*, *Pipilo albigula*, *Thalasseus caspius*, *Cyanura macrolopha*, and *Ossifraga gigantea*—five plates to a number, in the order given. We must congratulate Mr. Elliot on a very marked improvement in the drawing of the figures. It looks as if he had been studying from the life, a process which some so-called artists appear to scorn. One can hardly look at the plate representing the *Ptychorhamphus* without being struck with its resemblance to the immature state of *Fratercula*; and a Darwinian would no doubt say that the last genus was only an exaggerated form of the first.

---

* 'The Birds of North America.' By D. G. Elliot, F.L.S., F.Z.S., &c. Parts II.-IV. New York, published by the author, 27 West Thirty-third Street, 1866 & 1867. Imp. folio.

To Mr. Cassin we are indebted for a separately printed copy of another of his valuable papers, contributed to the 'Proceedings' of the Philadelphia Academy. This is "A Second Study of the *Icteridæ*," and contains a further account of the author's investigations into the birds of this family. His former work on the same subject we noticed last year (Ibis, 1866, p. 418). One new genus, *Idiopsar*, allied to *Quiscalus* and *Scolecophagus*, is established, the type of which is *I. brachyurus* (sp. nov.) from Bolivia. Three, or we may almost say four, new species of *Quiscalus* are described, viz. *Q. aglæus*, Baird, now formally separated from *Q. barytus* (L.), of which it is the Floridan representative, *Q. gundlachi*, from Cuba, *Q. brachypterus*, from Porto Rico, and *Q. rectirostris*, from an unknown locality.

Don Felipe Poey, the well-known naturalist of Havana, has commenced a new Journal devoted to papers on the Zoology and Botany of Cuba, entitled 'Repertorio fisico-natural de la Isla de Cuba.' The first number of this journal, published at Havana in 1865–6, contains a list of the birds of the island by the veteran ornithologist Gundlach*, who has laboured so long and so successfully in investigating this part of the fauna of his adopted country. M. Gundlach commences his article by some preliminary remarks on the general character of the Cuban avifauna, which merit much attention, and gives us a table of the geographical distribution of the species, which shows us its peculiarities at a glance. About 257 species are now recognized as having been met with in Cuba. No less than 119 of these are common to Cuba and the United States; but the greater part of these 119 species, at least among the land-birds, are migrants which visit the island only in winter. Eight species only are given as common to Cuba and South America; and even in some of these cases the specific identity is questionable. Yet in spite of this, there can be little doubt that the Antillean province, to which Cuba belongs, must be referred rather to the Neotropical than the Nearctic region. That this is the case is shown by such types in the West Indies as *Euphonia*, *Cœreba*,

---

* "Revista y catalogo de las Aves Cubanas," por Juan Gundlach. Rep. Fis.-Nat. de Cuba, vol. i. pp. 165.

Chrysotis, *Ara*, *Priotelus*, *Geotrygon*, *Hadrostomus*, and others, which are all quite foreign to the Nearctic avifauna, while *Corvus* is almost the only noticeable form common to the Antilles and United States which does not extend into South America.

The species of birds peculiar to Cuba are considered by Dr. Gundlach to be 40 in number. Looking through his list we should make them out to be 43, an extraordinarily large proportion out of a total of 257 species. No less than *five* genera are restricted to the island, namely *Teretistis*, *Melopyrrha*, *Xiphidiopicus*, *Priotelus*, and *Starnœnas*. All these, except the first, are monotypic, *Teretistis* alone consisting of two representative species, one inhabiting the western and the other the eastern districts of the island. The most noticeable Antillean forms, *i. e.* common to Cuba and the other Antilles, but not found elsewhere, are *Gymnoglaux*, *Mimocichla*, *Spindalis*, *Saurothera*, and *Todus*, besides many sections of widely diffused genera, such as the group of Parrots allied to *Chrysotis leucocephala*, and the *Icteri* akin to *T. hypomelas*.

We may regard the ornithology of Cuba as now pretty fairly worked out, although there are doubtless still discoveries to be made among the *Tyrannidæ* and more obscure groups. There is, however, a great lack of specimens of Cuban birds in European collections generally, the Berlin Museum alone containing anything like a complete set; and we trust that Dr. Gundlach will set about distributing series of his new species in various quarters, and endeavour to make his interesting discoveries more widely known.

XXII.—*Letters, Extracts from Correspondence, Notices, &c.*

We have received the following letters addressed "To the Editor of the 'The Ibis'":—

Epsom, Auckland, New Zealand,
11th January, 1867.

Sir,—I have been away, making a geological excursion in the Waikato, and have just returned, or I should have written before. . . . . The *Apteryx* is not rare here in the thickly-wooded primary slate masses, but is seldom heard, and never seen except when hunted. I had the pleasure of hearing one one night: the natives told me that it was a male; so I suppose that the sexes have different cries.

The Pheasant is getting very numerous here, and breeds twice in the year. The Virginian Quail (*Ortyx virginianus*) also thrives well. No other birds have as yet been naturalized in this province. Our "Lark" (*Anthus novæ-seelandiæ*) has increased in numbers since the land was cleared. Our only migratory birds, two Cuckoos, arrive in October: one of them (*Eudynamis taitensis*) is a first-rate flier, often seen high in the air; the other (*Chrysococcyx lucidus*), although very common and constantly heard, both round Auckland and in the bush, is rarely seen, as it hides in the trees. Neither have a note like our Cuckoo; but, according to the natives, both lay eggs in other birds' nests.

The commonest birds in the bush about here are:—

Hieracidea novæ-zelandiæ.
Athene novæ-zelandiæ.
Halcyon vagans.
Prosthemadera novæ-zelandiæ.
Certhiparus novæ-zelandiæ.
Rhipidura flabellifera.
Anthus novæ-seelandiæ.
Platycercus pacificus.
Nestor meridionalis.
Chrysococcyx lucidus (*in summer*).
Carpophaga novæ-seelandiæ.
Botaurus pœcilopterus.
Ocydromus australis.
Anas superciliosa, *and four other species.*

I hope ornithologists will give us no more "*Novæ-zelandiæs*;" we have *twelve* already!

In the winter the Kingfisher lives about the town, and often eats insects in the fields; the first bird I saw on landing was one in the barrack-square: now they are all by the river, breeding.

I am, &c.
F. W. Hutton.

Kingsbury, Middlesex,
March 29, 1867.

Sir,—You may be interested to hear of a novel situation for a Stock-Dove's nest. The spire of the old village church here is a wooden one, and has for many a day given shelter to a loving couple of White Owls, and several pairs of Starlings, not to mention the noisy Sparrows which have taken possession of the water-spouts.

During the summer of 1865, I frequently remarked a pair of Pigeons flying out from a good-sized hole at the base of the spire. They looked like Stock-Doves; but the scarcity of this species here in the breeding-season, as well as the unlikely situation which they had selected, caused me to think at the time that they could be only a pair of escaped "Blue Rocks." I could easily have shot one of the birds as it flew out, and thus settled the question, but I was anxious to prove something more.

An inspection of the interior of the church, which I unfortunately delayed until the summer was far advanced, showed that a nest, evidently a Pigeon's, had been built upon a cross beam above the bells. I was too late then for eggs; the young had flown. There was nothing for it, therefore, but to wait until the following spring, and then endeavour to secure a pair of young birds. Accordingly jotting down a memorandum in my notebook, and resolving to keep the fact of there being Pigeons in the church-spire to myself, I waited patiently for another nesting-season. My patience has been so far rewarded, that, after watching a pair of birds take up their quarters in the same site as that selected the previous year, and after several anxious visits of inspection, I was at length enabled, in July 1866, to carry off a pair of fine young pigeons, which were almost able to fly. The "coo" of the Stock-Dove is very peculiar, and by this time I had heard and seen enough of the birds in question to convince me that they belonged to this species.

Their young, which I had secured, after being fed for some time in a cage in the house, were transferred to my aviary. They are now in fine plumage, and have proved, as I suspected, to be undoubtedly the young of *Columba œnas*.

I am, Sir, your obedient servant,

J. Edmund Harting.

April 25, 1867.

Sir,—In the year 1860 I bought a specimen of *Hypotriorchis eleonoræ* from Mr. Jamrach. It was then in the immature dress which so nearly resembles the adult plumage of *Hypotriorchis subbuteo.*

In the year 1861, a coloured drawing of this specimen was made for me by Mr. Wolf.

The bird continued very healthy until February 1867, when it died suddenly, being at the time in apparently good condition both as to flesh and plumage. It proved on dissection to be a male.

This specimen was, when it died, in almost entirely the same stage of plumage as when I purchased it, only differing from Mr. Wolf's drawing in the dark shaft-marks on the sternal and abdominal feathers being apparently rather longer and also somewhat broader and less defined on their lateral margins.

The tardiness of any change towards a fuliginous plumage in this specimen may have been due to its having been kept in confinement; but I think, nevertheless, that it is worth recording.

J. H. Gurney.

Chislehurst, Kent,
May 12, 1867.

Sir,—In my "Notes on Birds collected in Tenasserim and the Andaman Islands" (P. Z. S. 1866, pp. 537–556), I pointed out certain characters in a specimen of a *Garrulax,* from Siam, which appeared sufficiently important to warrant me in regarding it as belonging to an undescribed species. Since then I have had the advantage of perusing M. Pucheran's admirable essay on the dentirostral types contained in the Paris Museum. When reading the detailed description (Arch. du Mus. vii. p. 376. no. 37) given by that eminent zoologist of *Turdus diardi,* Lesson (Traité, p. 408), from Cochin China, I at once recognized the characters which led me to separate *G. leucogaster,* nob., from *G. leucolophus* (Hardw.) and *G. belangeri,* Less. M. Pucheran writes, "la tête est blanche, ainsi que le thorax et *l'abdomen* dans sa partie médiane" et "ses côtés de l'abdomen et les plumes couvrant le haut des tarses sont brun roux." In my description of the Siamese specimen (*l. c.* p. 548. no. 20), the words used are, "the entire under surface is white, the thigh covers and flanks only being rufous." M. Pucheran ends his article thus—"Je ne sache pas que cette espèce ait été décrite depuis l'époque à laquelle M. Lesson l'a dénominée pour la première fois; mais il me semble qu'elle peut parfaitement s'isoler des espèces connues de *Garrulax* par le blanc de la partie médiane de son abdomen."

Describing as new a previously described species is justly considered inexcusable. Yet, in this instance, if I have done so, this much may, I think, be urged in palliation: Lesson, who classed it as a *Turdus*, merely says "tête et *cou* blancs." In the next place, when, three years later (Bél. Voy. Zool. 1834, p. 258), he founded his genus *Garrulax*, enumerated the species he classed in it, and described the closely allied form, *G. belangeri*, he omitted all mention of *T. diardi*; nor is this species to be found under *Garrulax* in Lesson's 'Compléments de Buffon,' published in 1840.

Without actual comparison of the types I cannot positively affirm that the two belong to the same species. M. Pucheran does not mention the existence of a crest; and this omission, taken together with the difference of origin, makes it possible that the Cochin-Chinese species does differ from the one inhabiting Siam.

I am yours obdt.
WALDEN.

London,
May 24.

SIR,—An adult female *Ciconia nigra*, in splendid plumage, was shot last week at Westacre in Norfolk. It had been living at and about the river for a week or more, and might very possibly have stayed longer.

I am, &c.
ANTHONY HAMOND, Jun.

---

16 The Grove,
Boltons, S.W.

SIR,—Mr. Sclater has kindly forwarded me the following extract from Tchihatcheff's 'Voy. dans l'Altaï,' referring to *Cinclus leucogaster* (see *anteà*, p. 118), taken from a copy of that work in the Library of the Athenæum Club:—

"Tchihatcheff (Pierre de), 'Voyage Scientifique dans l'Altaï

Oriental' (Paris, *Gide*, 1845), contains (p. 417) a contribution by Prof. Brandt, of St. Petersburg, entitled "Considérations sur les Animaux Vertébrés de la Sibérie Occidentale," the third section of which gives an "*Enumeratio* animalium vertebratorum Siberiæ occidentalis." In the list of birds, two species of *Cinclus* are given (p. 442), *Cinclus aquaticus*, Briss., and *C. leucogaster*, Eversm.; but no remarks on or description of either, further than the following paragraph (p. 460):—"Le genre *Cinclus* possède en Sibérie une espèce qui paraît lui être propre, et que Eversmann a désignée par le nom de *Cinclus leucogaster*. Au reste elle a déjà été signalée par M. Pallas comme une variété."

I am, &c.,

OSBERT SALVIN.

Dr. Hartlaub, writing to us lately from Bremen, says, repeating the information he gave to Mr. Gould:—

"I believe that the first original description of *Cinclus leucogaster* (Ibis, 1867, p. 118) was published by Eversmann in that part of the 'Addenda ad Zoographiam Rosso-Asiaticam,' of which the whole edition was destroyed by fire with the exception of a very few copies. *Cinclus leucocephalus* is also in the Bremen collection."

The two species of *Luscinia* from South Africa mentioned by Dr. Hartlaub (Ibis, 1867, p. 18) are surely *not* veritable Nightingales. They were originally described as *Luscinia* by Sundevall (Obs. in Levail. Ois. d'Afr. p. 44), but come very near to *Erythropygia* and *Ruticilla*. '*Luscinia*' *sinuata* of Sundevall is congeneric with the 'Traquet familier' of Levaillant, which is in the Bremen Museum.

The fine general collection of bird-skins formed by the late lamented Hugh Edwin Strickland has recently been most liberally presented by his widow to the University of Cambridge, and will be lodged in the New Museum at that place, in the same room with the Swainsonian Collection, which was purchased by subscription in 1843, and given to the University. These two collections probably contain more type-specimens than are to be found in any museum, with the exception of the British, in the United Kingdom; and we trust that the University authorities will lose no time in contriving that they shall be available for consultation and study by ornithologists generally. We learn also, by the last Annual Report of the Yorkshire Philosophical Society, that the collection of British Birds formed by the late Arthur Strickland has been presented to the Society's Museum. This collection contains many interesting specimens, among them *Ardea alba* and *Puffinus major*, killed in England, to say nothing of a fine *Alca impennis*, of which last the Society already possessed a very fair example.

We have received from a friend who is well qualified to speak with certainty on the subject, the information that the *Tarsiger cucullatus*, Gould, described by Mr. Blyth in our pages a short time since (*suprà*, p. 16, note) is a species figured by Levaillant (Ois. d'Afr. pl. 157), and now known as *Pogonocichla stellata* (Vieill.). In 1850 it received another name from Prof. Sundevall, that of *P. margaritata*, as we learn from that naturalist himself in his critical remarks on Levaillant's work.

Mr. Swinhoe, from whom a long and interesting communication is unavoidably postponed to our next number, has recently informed us of the much-to-be-lamented death, at Hongkong, of Professor De Filippi, at the the age of fifty-three. This enterprising naturalist, whose travels in Persia we only a few months since had to record (Ibis, 1866, p. 414), sailed in the Italian frigate 'Magenta,' as the head of a scientific mission, on a voyage round the world, and had successfully reached China on his way to Australia. It is a satisfaction to know that our contributor, Signor Giglioli, so well known to many Englishmen from his residence some years since in London, also accompanied the expedition; so that our branch of science will be well taken care of. Professor De Filippi is said to have been deservedly popular among his own countrymen; and it is greatly to be regretted that a naturalist so able should have fallen a victim to the notoriously treacherous climate of our Chinese possession.

THE IBIS.

NEW SERIES.

No. XII. OCTOBER 1867.

XXIII.—*Jottings on Birds from my Amoy Journal.* By ROBERT SWINHOE, Her Majesty's Consul, F.Z.S. &c.

[Continued from p. 237.]

ON the 3rd November 1866 I received from Mr. T. Watters, Acting-Consul at Taiwan (Formosa), a pair of Kestrels in immature or banded plumage. The male has the legs and toes fine orange, with black nails, the cere and orbit orange-yellow. The female has the cere whitish, tinged with yellow, and the eyelid whitish yellow; her legs and feet are yellow, only tinged with orange. Both have rich brown irides. In this plumage they answer well to the Amoy Kestrel, the males of which in a similar manner have the soft parts more brightly tinted than they are in the females.

November 11th.—Up the river that leads to the city of Chang-chow-foo. It was high tide, and the marshes were covered. The Ducks sat about in small parties; but they were wild, and the boat jumped about so on the waves raised by the strong north-easter that it was impossible to aim straight enough for a cartridge to do effective work. I observed a bird like a large black Swallow skimming about, occasionally alighting and floating on the water, and saw at once that it was a Petrel. The first two shots missed; but it showed no alarm, and settled again at no great distance, when a charge of dust fetched it. It was a Petrel, true enough, but with the body of a nearly uniform sooty colour, and with only one opening to its nose. But for this last character, I would place it under Bonaparte's *Thalassidroma melania* (Consp. Av. ii. p. 196), though that species is described as having a very short tail. Gray's 'Genera of Birds' gives the type of *Thalassidroma* with a double nostril; and I cannot find it anywhere stated that any of the known species has only one nasal opening. In *Procellaria glacialis,* however, I see this peculiarity occurs. I therefore propose to bring forward our bird as

THALASSIDROMA MONORHIS, sp. nov.

Length 7·3 in.; wing 6 in.; tail 2·9 in.; wing extending beyond tail about ·5 in. Iris rich brown. Bill black, nostril with only one hole apparent at the end of the tube. Inside of mouth flesh-colour. Tongue flat and broadly sagittate, furrowed down the middle and on either side. Legs black, the inner side of inner toe and both sides of middle toe whitish near their bases. Tibia bare for nearly ·34 in.; tarse nearly ·92 in.; middle toe and claw ·83 in. Wings much curved near the tip. Tail furcate, inclined upwards at its sides, especially at the fork, and consisting of twelve rectrices, of which the outer feather is ·6 in. longer than the middle. Head and neck deep ashy-grey, lighter on forehead and round bill. Upper parts sooty-brown, washed with grey, the scapulars and upper tail-coverts having darker shafts. Lesser wing-coverts, quills, and tail brownish-black, blacker on the two first. Greater wing-coverts light greyish-brown, broadly margined with white. Under parts deep soot-colour tinged with brown, blacker on under-wing and under tail-coverts. The latter are as long as the middle rectrices. The quills are white at their bases. It had a strong musky odour, like the Albatros, and like that bird was found to support two species of lice of the genera *Lipeurus* (Nitzsch) and *Docophoroides* (Denny).

On dissection the cluster of eggs showed this specimen to be a female. *Trachea* broad and simple, with a pair of sternotracheal muscles; at the junction with the *bronchi* broad, and peaked in front, without muscles. *Bronchi* short and broad, without convolutions. Lobes of liver small, and not extending over the belly. Belly enveloped in white fat. Proventricular sac very large and fleshy, empty, with a small pea-like pit or stomach proper with an adhering *epithelium*, containing a little greenish-yellow *exuviæ* of marine seeds like duck-weed, some black specks, and one small limy grit. Intestines ·2 in. thick at *duodenum*, ·1 in. thick for rest of length; total length 7 inches; one small *cæcum* almost touching the *cloaca*.

This is the first Petrel that I have met with in China. Dr. Jerdon states (B. of Ind. iii. p. 827) that Stormy Petrels have been seen at the mouth of the Ganges, but that he had procured no specimens. The species noted from Eastern Asia (Kurile Islands) by Pallas (Zoog. R.-As. ii. pp. 315, 316) are *Procellaria pelagica* and *P. orientalis*; the former seems to be *Thalassidroma leachi*, Temm., and the latter, *T. furcata* (Gmel.). Von Schrenck (Reis. Amurl. i. p. 515) obtained the former from the Kurile Islands. Ours adds a third species to this region.

During the same excursion I shot a large Egret, *Herodias alba*, in the unadorned winter plumage. The bird was a male and had its bill and cere orange-yellow, and its legs entirely black, without the light tibial ring of the hot season.

Dr. H. Giglioli, who is now in China in the Italian Frigate 'Magenta,' called my attention to the fact that our black *Mina* is not the *Acridotheres cristatellus* (L.) of Bonaparte's 'Conspectus.' This I had observed myself before; but not having a copy of Linnæus's 'Systema Naturæ' by me, I was unable to ascertain whether his description did not refer to the Chinese bird. Bonaparte (*op. cit.* i. p. 419) under *A. cristatellus* (L.), gives "*crisso caudaque ad apicem albis*," "ex Bengal." I can find no such bird in Jerdon's 'Birds of India'; but Bonaparte may in this general term "Bengal" have included the Tenasserim Provinces; and if his description agrees that of Linnæus, then the true *A. cristatellus* (L.) is probably the bird from Siam, which I have called *A. siamensis* (P. Z. S. 1863, p. 303); and the Chinese Philippine bird will have to stand, according to Bonaparte (*loc. cit.*), as *A. philippensis* (Temm.), given as "ex Ins. Philipp. Macao," "*tectricibus caudæ inferioribus nigris, albo-marginatis* nec *albis*." Unfortunately, however, tradition says that the *Mina* in the Philippines was introduced by the Spaniards from China (Amoy). In such case the specific name would scarcely be applicable.

Nov. 15th.—My hunter brought me a female Shoveller, *Rhynchaspis clypeata.* Length 18·25 in.; wing 9 in. Tongue yellowish flesh-colour. Bill yellowish olive-brown, the lower mandible, the *laminæ,* and basal two-thirds of the upper mandible about its edge being orange. Iris bright yellowish-brown. Legs fine deep orange, the interdigital webs, except along edges near the toes, being blackish.

Nov. 19th.—A friend sent me a Falcon shot in the act of eating a Sandpiper, which he was seen to catch. *Falco peregrinus,* ♂. Length 17 inches; wing 12·75 in.; tail 6·75 in.; tarse 2·1 in., feathered for nearly ·75 in.; middle toe 2 in.; its claw ·7 in. Legs and toes yellow with a greenish tinge; claws blackish-brown. Irides blackish-brown. Skin round the eye and cere bluish-white with a very faint tinge of green. Bill bluish-white tinged with purple, blackish on its apical half. Plumage spotted, striped, and margined, as of a bird in first year's dress.

I think I was wrong in referring the specimen of the Godwit I took to England to *Limosa uropygialis.* At least, one that I have now before me seems distinctly to be *L. lapponica,* ♂. Entire length 14·5 in.; bill 3·25 in. Legs extending beyond tail only 1·33 in. Wing 7·75 in., the end of tertiaries reaching to within 1 inch of tip of quills. Bare part of tibia 1·25 in.; tarse 2·1 in.; middle toe and claw 1·4 in., claw of middle toe bulging inwardly and falcated. Legs lead-colour, claws black. Bill flesh-colour, apical half of the lower mandible and the upper from beyond nostril to tip being brownish-grey. Irides deep brown. Lower neck and breast retaining some of its summer rufous tint. This species cannot be the *L. uropygialis*; for its rump and upper tail-coverts have the feathers centred with blackish-brown oval spots, as in *L. lapponica,* and are *not barred.* Tail 3·1 in. long, consisting of twelve barred feathers, the two middle ones mucronate. Male, by dissection. Proventriculus large and broad, contracting as it meets the stomach. Stomach somewhat heart-shaped, about ·8 in. broad by 1 in. long, with strong thick lateral tendons. Epithelium leathery, yellowish, containing small angular pebbles and a few small crabs. Intestine 33 in. long, from ·3 to ·4 in. thick; two adnate cæca occur on it about 1 in. from the anus, these are ·6 in. long by ·2 in. thick. About 12·5 in. from anus occurs the cæcal appendage, curled like a worm, and about 1 in. long. Two small, black, narrow testes, ·3 in. by ·1 in.

In Selby's 'Illustrations of British Ornithology' (ii. p. 145) it is said of Temminck's Stint, "The Linnæan species (i. e. *Tringa pusilla*) is further described as '*corpore subtus rufescente*;' that is, with the under parts of the body rufous or reddish—a character by no means applicable to the *T. temminckii* at any period, or change of plumage, but which is so to another exotic species." The writer does not say to what exotic species. If to the *T. albescens*, it is well applied, and suits better than that name. If to the American Lesser Stint, then the American approaches in this red change of plumage to our eastern *T. albescens*, and leaves *T. minuta* to stand with *T. subminuta*, which two last in summer have spotted, and not red breasts.

Nov. 30th.—Among some birds brought by my Amoy hunter was a Shore-Pipit, of the form described by me as *Anthus blakistoni* (P. Z. S. 1863, p. 90). This is new to the Amoy list. The collection also contained a *Budytes*, which has the yellow eye-streak, green head, and dark ear-coverts of the Formosan form. There were also two young birds of different ages of *Hydrophasianus sinensis*, which were shot on the seashore.

Another hunter returned from the interior between this port and Foochow, and handed me the following interesting species:—

Porzana bailloni.

A *Palæornis* allied to *P. schisticeps* I think:—green with a clayey-tinged head and a very short tail. The hunter says he cannot tell whether this was an escaped bird or not, but he saw it shot on a tree between Amoy and Chinchew. It bears no indications of confinement about it. The tail is singularly short, and its feathers are worn at the ends; at its roots I cannot find signs of growth. Bonaparte's 'Conspectus' does not describe the known species of the Parrots, nor yet does any book in my possession. I must therefore defer a comparison of it until opportunity occur. *Palæornis rosa* is the only authentic species hitherto procured from China; and, as far as my knowledge goes, Canton is its most northern coast limit.

Muscicapa mugimaki, tallying with the description in the 'Fauna Japonica,' except that, instead of black on the back, it is brownish-grey, and leaden on the rump. This may be the winter change in this species, or perhaps a sign of immaturity. If the latter, it destroys the identity of the *M. mugimaki* with the so-called *M. luteola* of Middendorff, which I once thought I had established (P. Z. S. 1863, p. 290).

Motacilla, sp.?, in many respects agreeing with my grey-backed *M. ocularis,* but with much black on the back, the black on crown advanced close on the bill, and no black eye-streak. It may be a cross between *M. ocularis* and *M. luzoniensis.*

Eophona melanura. Two males with the ends of the primary quills entirely white. I have observed this peculiarity in individuals of this species before.

Totanus brevipes in the fully adult winter plumage, as figured by Mitchell in the 'Genera of Birds,' under the name of *T. fuliginosus.*

Dec. 10th.—Received a Pheasant shot at Chefro. It is the ordinary *Phasianus torquatus.*

Dec. 15th.—My Amoy hunter brought me two Cormorants, both immature, but one with much more white on the under parts. The latter was a juvenile of *Phalacrocorax capillatus* (Temm.), the former of *P. cormoranus,* var. *sinensis* (Shaw). The wings of both are of equal length, but the toes of the former are longer, fleshier, and broader, and its tarse deeper. Its bill is longer, and the feathers *advance* from the rictus down the ramus of the lower mandible, and proceed halfway up the intercrural membrane into a fine point. In *P. sinensis* the facial feathers recede from the rictus, and advance again below the lower mandible into a short angle on the gular membrane. The face, skin, and pouch in this bird are brimstone-yellow, but in the *P. capillatus* orange-yellow. In the adult state the distinctions of the head are more decided, and especially so during the nuptial season, when *P. capillatus* has its head sprinkled with long white fibres, and *P. sinensis* with narrow cream-coloured feathers.

Dec. 25th.—Went up the Amoy Creek at nearly high tide, and bagged three Curlews. They were all *Numenius major*, which assembles there in large flocks. Up the river *N. arcuatus* is the commoner species. The two are sometimes found together on the mud, though the flocks of neither kind appear to commingle; and when a Curlew is wounded, I note that individuals only of his own species come to condole with him. *N. major* can be distinguished at a long distance by its much larger bill; but I cannot say that I have discovered any difference between the wail of the two species. I believe them, however, to be quite distinct. When they first arrive from the north they are fine eating; but a stay of a month or so with us is enough to turn them fishy in flavour.

Numenius major, ♀. Bill, upper mandible wood-brown, blacker on culmen and towards tip, greyer on base-skin, and pale (approaching to flesh-colour) under the nostril and along the tomia for some way beyond line of nostril; lower mandible for half its basal length flesh-pink, the rest wood-brown. Iris deep hazel. Inside of mouth flesh-colour. Legs washed with leaden and faintly tinged with olive-green, nails deep brown.

Dissection.—Proventriculus ·12 in. by ·6 in. Gizzard rounded, somewhat heart-shaped, in three lobes, quite flat on intestine side, with an edge, very muscular, 2 in. in diameter, by 1 in. deep; outer lobes composed of thick muscles ·7 in. thick; lower lobe containing the maw; epithelium containing remains of small *Crustacea*. One cæcum 4 in. long, ·2 in. thick, the other ·25 in. shorter, both bluish. About 2 feet from the anus occurs the cæcal appendage, doubled on itself, 1·5 in. long by ·2 in. thick, somewhat pointed and white. Intestine white, about 4 feet long, and from ·2 in. to ·4 in. thick. Rings of trachea smaller and closer set than those of bronchi. Lower larynx with bony side-supports, projecting behind, and meeting in front in an open peak. Sterno-tracheal muscles given off from sides of trachea; no muscles at the lower larynx.

Dec. 26th.—A friend sent me a wild Gander shot on the flats of the Changchow River. It agrees with *Anser segetum*, but has the rump a deep blackish-brown, instead of grey. Its lower neck and breast have the feathers ashy-grey, but so broadly margined with pale yellowish-brown that the grey is almost entirely concealed. Length 31·5 in., wing 18·5 in. measured with the curve, 17·6 in. from carpus across to tip. When closed, the wing extends to over ·5 in. beyond tail, which is of fourteen feathers, and about 7 in. long. Bill black, with a pinkish-red ring behind the dertrum, ·5 in. broad on the upper, and ·25 in. on the lower mandible. Legs very bright orange, with black claws. Bill from vertex of frontal angle 2·8 in., from rictus 2·6 in., depth at base 1·5 in. Tarse 3·4 in., middle toe and claw 3·2 in.

Dissection.—Gizzard large and enormously muscular, kidney-shaped, about 5 inches long by 3 broad, the strong muscles being at top and bottom, leaving about 1 inch diameter of cavity extending through the middle. Epithelium thick and rugose, containing equal quantities of white siliceous grit, and pale moss-like sea-weed nibbled small. Intestine thick, greenish and watery.

The 11th November was my last morning on the Duck-ground, near the mouth of the river, and there was then not a Goose to be seen. The same night a strong north-easter blew; and on the 12th the flats were alive with Geese, and the first Goose of the season was shot. The measurements of this bird were precisely similar to those of the one already mentioned in total length and length of wing. It weighed over seven pounds. Its bill and legs were same as above. Head liver-brown, neck lighter. Feathers of the back margined with whitish. Tail-coverts white. *Rump deep blackish-brown.* Tail deep brown, margined and broadly tipped with white. Under parts dingy yellowish. Under-wing deep cinereous or ashy-grey. Belly and vent pure white. Entire stems of quills and basal half of those of tail-feathers white. If Selby (Brit. Ornith. ii. p. 266) is right in calling the rump of the western species *deep grey*, our eastern bird may prove to be a distinct species, or at least a good variety. I have no sketch of the head of the true *Anser segetum*; but the head of our bird differs from that of *A. grandis* in Middendorff's plate (Sib. Reise, ii. tab. xx. fig. 1) in being smaller and having the bill shorter, deeper, and differently shaped.

The swarms of Geese that visit our waters all seem to be of this species; at least I have seen a good few of those shot, and have not yet noticed a different bird. In Shanghai, as I have stated before (P. Z. S. 1863, p. 323), several species of Geese are brought to the market in winter.

Dec. 29th.—Some months ago I noted that the Bunting I have hitherto called *Emberiza ciopsis*, Bp. (P. Z. S. 1863, p. 300), was quite a distinct thing and, so far as I know, undescribed. I put the bird by for a future time. Dr. Giglioli, however, who has lately been so vigorously exploring in the China field in company with Prof. De Filippi, having again brought this fact to my notice, I proceed without delay to introduce this species, in honour of my valued friend, as

EMBERIZA GIGLIOLII, sp. nov.

♂. Length 5·7 in., wing 3 in., tail 2·75 in. Legs brownish flesh-colour, with deep brown nails. Bill blackish-grey, tinged with blue. Iris hazel. A line between the bill and eye, a narrow line round eye, and the moustache-streak black. Ear-coverts and cap deep russet, the latter broadly tipped in the middle with brownish-grey. The rest of face and neck smoke-grey, nearly white on chin, eye-brow, and space between moustache and eye. Mantle light greyish-russet, the mid-dorsal feathers being black, edged with deep russet. Upper tail-coverts and two middle rectrices black, broadly edged with fine russet. Tail blackish-brown, the outer feather having its external edge and two-thirds of its inner web white, the second on the apical third of its inner web only. Primaries light hair-brown, narrowly edged with white on the apical half, and on the basal half more broadly with russet-white. Secondaries and tertials blackish-brown, edged with russet, the latter very broadly. Winglet and coverts blackish-brown, the former very narrowly edged, the latter so broadly as to hide the black of the basal portion of the feathers. Lesser wing-coverts more russet than black, margined with light ochreous. Under wing-coverts white, irregularly waved with blackish. Under parts pale yellowish-russet, variegated with russet of deeper hues on breast, flanks, and under tail-coverts.

♀. Somewhat smaller; wing 2·7 in. Wants the black, white, and grey on the face. The ear-coverts are tinged with russet; and so are the sides of the crown, which is otherwise marked like the back. Eyebrow and throat pale dingy ochreous. Moustache lightly sprinkled with blackish. Rump and tail-coverts nearly as bright russet as in the male, but the rest of the plumage much paler and dingier. This species is in Amoy a winter visitant.

Dec. 31st. Four Teal shot up the river. They are all handsome cock birds and, according to Dr. Giglioli, of the *Aix formosa,* Brandt, which I take to be the true *Anas glocitans* of Pallas. Pallas's description (Zoogr. R.-As. ii. p. 262) answers well to our bird; and the form of trachea noted by him is precisely that of our species. My four specimens all have the bill greyish-black throughout. Their legs vary from an ochreous to a light olive tinge, browner on the toes, and blackish-brown on the interdigital webs. They differ from Selby's "Bimaculated Teal" (Brit. Orn. ii. p. 321)*, in the following important particulars:—No orange on base of bill or on legs. A broad white line on the side of the breast, where the feathers overlap the wing. Crown deep black, in some birds more or less edged with reddish-brown. Greater coverts broadly tipped with orange-buff. Sides of mantle french-grey, waved finely with black. Speculum broadly tipped with white. Upper tail-coverts olive-brown and brown, margined inwardly with ochreous. Middle tail-feathers not black, but light brown. These are the chief distinctions, and quite sufficient to show that the eastern bird is distinct from its western congener. That this plumage is not simply seasonal, I can show by a specimen I possess which died in our aviary at Amoy in June, and which is similarly marked to those now procured.

The Bluethroat, *Cyanecula suecica* (L.), has occurred in

---

* [This is now pretty generally admitted to be a hybrid, *cf.* P. Z. S. 1861, p. 393.—Ed.]

Amoy; for in the first week in January 1867 my hunter brought me a fine male specimen with the red spot. I have not observed it so far south before.

The hunter also produced the skins of two green Shags differing greatly in size, but evidently of one species, of which, I think, I procured at Amoy many years ago a small specimen. This was destroyed on its way to England, and I therefore could not satisfactorily determine the species. I referred it subsequently to *Phalacrocorax bicristatus,* Pall. (P. Z. S. 1863, p. 325). The birds now in hand would appear to have their nearest ally in *P. sulcirostris,* Brandt *fide* Bonaparte (Consp. Av. ii. p. 178), having parallel *sulci* along the culmen of the bill; but our specimens have unfortunately no crest or nuptial markings to lead to a certainty of their identity. They differ from the description in having extremely fine green and purple reflexions, especially on the neck and rump. The latter in most lights is of a fine metallic green. It is possible they may be the "*Carbo sulcirostris,* Temm. ex Borneo," which Bonaparte does not describe. I will, however, for my own satisfaction support the description that follows with the name

PHALACROCORAX ÆOLUS, sp. nov.

The larger skin I take to be that of a male. From it I should judge the length of the bird to be about 28 inches; wing 11·25 in.; tail 7 inches, of twelve stiff graduated and narrow feathers, the outer ones 2 inches shorter than the middle. Bill sulcated along either side of the culmen to the nail at tip. The lines of culmen and gonys nearly straight. Bill narrow and black; length from forehead to tip 1·8 in., from gape 3 in., depth about ·4 in. Skin round eye, below it, and at base of *crura* bare, rugose, and black, the feathers advancing in an acute angle well up the intercrural pouch. Legs and toes purplish-black, the comb of middle toe brown. Tarse 2·1 in., outer toe and nail 3·75 in., middle toe 3·2 in., inner 2·3 in., hind toe 1·4 in. The nails in this are much longer than in *Phalacrocorax sinensis,* except that on the hind toe, which is shorter and smaller. The fourth wing-quill slightly longer than the third, and longest. Entire plumage deep black, beautifully shot with bronze and purple, except on the quills and tail. Concealed downy portions of small feathers light brownish-grey, nearly white at their roots.

Supposed female much smaller, and, according to my hunter, about a pound lighter in weight. Bill from forehead to tip 1·8 inch, bill from gape close on 3 inches; bill narrower and more graceful. Entire length of bird about 23 inches, wing 10·25 in., tail probably 6·25 in., but the feathers worn and moulting. Dorsal feathers and many of the lesser wing-coverts light bronzed-brown, margined with deeper hue. Many of the quills of both wings and tail light cream-brown, with deep leaden-coloured shafts, and with more or less deep hair-brown, chiefly on their inner webs. These are doubtless the remnants of the immature plumage; but this immaturity of the bird can scarcely account for the great disparity of size between the two specimens. Tarse 2·1 in., outer toe 3·6 in., middle toe 2·9 in., inner 2 inches, hallux 1·3 in., all including nails.

Jan. 18th, 1867.—A *Turtur rupicola* (Pall.) brought to me is only about two or three months old. I have also one of about the same age, shot in December 1865 in Formosa. Both these birds must have been hatched somewhere in the neighbourhood where they were procured. The old Doves do not show themselves in the south till the beginning of October. I should think it very probable, then, that this species repeats its incubation in its winter haunts. Our resident *T. chinensis* I have found sitting on eggs at the close of October.

Jan. 21st.—I have been handling a Coot fresh shot, and comparing it with all the descriptions of the European *Fulica atra* within my reach. In none of them (Selby's 'British Ornithology' and Temminck's 'Manuel d'Ornithologie' among others) is mention made of any white on the wings, or of black on the tail-coverts; and it is only relatively, by a remark on the absence of white on the wings of *F. cristata* by Dr. Bree (B. Eur. iv. p. 85), that I can learn of its existence in the commoner European species. I will here comment on the insufficient descriptions of home species that are too frequently given by writers on British Birds. They may serve to identify the species in the localities to which such works confine themselves; but they by no means suffice to point out the little niceties which it is necessary now-a-days to lay hold of for the purpose of differentiating races or closely-allied species. Sometimes only one sex is described in a bird that differs sexually in plumage. As a case in point I will mention that of the Hawfinch, *Coccothraustes vulgaris*. In Mr. Tristram's collection I saw a Hawfinch from Mount Sinai. We compared it with the descriptions of all the authors that Mr. Tristram had at hand, and he had a goodly series. The male British Hawfinch only was described. We were obliged of course to suppose that the female was similar; but we had our doubts, and on returning to London I procured a pair, when, true enough, the female presented the same peculiarity of wing (which was its chief distinction from the male) as did the Sinaitic skin. To return to the Coot. The specimens I before took home from Pekin and Hankow were younger examples than the present. I compared them with an English example, and referred them to the same species. With this last procured before me, my doubts are aroused. I will add a note on this adult male procured at Amoy :—

Fulica atra ?, ♂. Length 16 inches, wing 8·8 in. Bill from crest 2 inches, from rictus 1·5 in. Bare part of tibia ·8 in., tarse 2·6 in., middle toe and claw 3·9 in. Tail rounded, 2·5 in. long, of fourteen soft, broad feathers nearly smothered in the elongated upper and lower tail-coverts. Closed wing extending very slightly beyond tail. Bill and crest pale bluish-grey, nearly dead white; the former tinged on basal half with rose-colour. Iris bright rich chestnut. Legs and feet pale bluish-grey washed with olive-green, blackish at joints and near edges of web-festoons, and variegated on tarse with same. Claws compressed, except the middle one, which is falcated on its inner edge, all blackish-brown. A garter of orange-yellow, tinged with green, round tibia, just below the descent of the feathers. Head and neck black, glossed slightly with dark green. Upper parts greyish-brown with a tinge of olive, nearly black on tail-coverts and rump. Lower parts greyer, with the feathers here and there tipped with whitish. Under tail-coverts and apical third of tail deep black. Quills greyish-brown, blacker near tips, with blackish-brown stems. Edge round *carpus*, edges of first winglet-feather, and of first quill pure white. Secondaries broadly tipped with white.

Dissection:—Testes small. Gizzard containing dark green digested matter, mixed with large quantities of small, smooth siliceous grit. The green matter was dry, and composed chiefly of remains of *Notonectæ* and *Dytisci*, mixed with what I took to be pond-weed. Cæca long.

I note in Gray's 'Genera of Birds' that Bewick's Swan is set down as "*Cygnus minor*, Pallas." Pallas did not make a species of it; he simply noted it under *Cygnus olor* as "var. *β*." The word *minor* is the commencement of his description (Zoogr. R.-As. ii. p. 214). It is consequently only "*C. olor*, var. *β*, Pallas," which form of designation not being admissible as specific, Pallas's priority in pointing out the distinction between this and the common species must give way, and Yarrell's name, *C. bewicki*, be adopted.

February 2nd.—Received the skin of a Curlew, smaller than *Numenius arcuatus*. This must be "no. 29" of Mr. Cassin's paper in the Philadelphia 'Proceedings,' on the Birds of Hakodadi (Japan), criticized by myself (Ibis, 1863, p. 445). It seems to me to be a good species, and to add another to our already long list of Curlews. Mr. Cassin has not proposed for this bird a name; I will therefore introduce it as

NUMENIUS CASSINI, sp. nov.

Length of skin 17·5 in.; wing 10·25 in.; tail 4·5 in., of twelve feathers. Bill from forehead 4·7 in. Naked tibia 1·6 in., tarse 3·25 in., mid toe and claw 1·7 in., outer and inner toes of nearly equal length. Sides of breast with big long spots. Toes short. Back largely shaded with blackish-brown on centres of feathers. This species is certainly distinct from *N. arcuatus* and *N. major*, and is more of a size and colour with the smaller *N. uropygialis*, but wants the barred rump of that species. Bill curving more rapidly towards the tip, shorter, and not nearly so broad at the base as in *N. arcuatus*. Tarse longer, middle toe shorter, outer and inner toes more of a length than in that species.

Feb. 6th.—Returned from a few delightful days of Duck-shooting up the river. Made a few notes. Most of the Teal (*Querquedula crecca*) shot had their under parts stained with a clay-coloured pigment; one or two, however, had not. I cannot make out what it is, or what is the cause of it. I took down, on view of a fresh bird, the following:—

Querquedula crecca, ♂. Iris light reddish-brown. Bill blackish-brown. Legs light buff-leaden, with light purplish-brown webs and claws. Tail of sixteen feathers, the two middle ones extending beyond the rest about ·25 in. and ending in narrow points. Bill of female brown.

Mareca penelope, fine old male. Iris deep reddish-brown. Upper mandible fine light French grey, with ·5 in. of tip and ·7 in. along apical edge black. Lower mandible also black. Legs leaden-grey, blacker on webs and claws. Tail of fourteen feathers, the two middle ones protruding into points ·25 in. beyond those on either side of them. Length of bird 19 inches, wing 10·1 in., tail 4·2 in., middle feathers ·6 in. longer than laterals, wings when closed 1·25 in. short of tail-tip.

Dafila acuta, ♂. Iris deep hazel, with narrow pale grey outer circle. Bill black, with a broad bluish or French grey stripe on either side from the base of the frontal angle under the nostril to the side of the *dertrum*. Legs very pale yellowish flesh-colour, variegated with shades of purplish-brown; darker tint of last on nails and on the web-membranes.

Fuligula cristata, fine old male. Iris bright chrome-yellow. Bill, upper mandible and basal half of edge of lower fine indigo-grey; broad tip to upper mandible and rest of lower deep black. Legs indigo-leaden, washed with black on tarse and on joints of toes; webs and claws purplish-black. Tail rounded, of fourteen pointed feathers.

We tried to shift our boat during the night from the north to the south branch of the river; but the pilot stuck us on the mud, and we found ourselves high and dry next morning. Took to small boats and pulled up to where the two rivers join, near Cheo-bay, about fifteen miles distant from Amoy. Several Pied Kingfishers, *Ceryle rudis*, were hovering over the stream, and small parties of Lapwings, *Vanellus cristatus*, flying over ploughed fields. Continued down the south stream, long pull against the tide, to the walled town of Haiting. Our shooting-boat arrived later. Commenced war again against the wild fowl. The second morning the water was calm as glass, the sun fiery, and tide high. Thousands of Ducks and Geese were floating lazily on the mirror-like expanse, waiting for the outflow, rising in flights with a rushing sound of wings as my small boat came slowly towards them. My head felt dizzy in trying to think out the different species that dotted the water before me. I observed a small group of pied birds floating in a clump. Not Sheldrakes, for two or three genuine Sheldrakes are paddling not far from them! *Mergus albellus*? Too close together! Must be a novelty in the Duck line! My heart throbs with excitement. A few strokes more, and my cartridge can reach them. The Ducks keep on fluttering away on all sides; but the pied group still remain. I fire; one pied fellow remains motionless, the rest, seven or eight in number, stream away with what speed they can, which is not much. As they rise I note the long legs and curved bill, and am annoyed to find that my new Duck is only an Avocet! My companion shot a second on another part of the marsh. It was in company with two or three others on the mud, who were "larking" with it, running backwards and forwards past one another with speed. In the two birds procured we had fortunately both sexes. I carefully compared them, as is my wont, with descriptions of the European species with which the Chinese species has been hitherto confounded; and I was not a little surprised to find that my birds present differences which justify their separation at least as a variety or *conspecies*. As in the case of the Coot, the descriptions of Temminck and Selby are too scanty to afford nice discrimination; but the peculiar marks in this Avocet are too noticeable to be omitted in even a cursory sketch of the bird, and it is curious that Pallas did not mark them in the Siberian bird. These peculiarities are not due to youth, sex, or individual variation, as my birds are of different sexes, both adult, and both have them. The Chinese species differs from the old *Recurvirostra avocetta* in having the back of the lower neck and upper back light grey, and the middle tail-feathers grey, tipped with black, instead of pure white in both cases. I cannot tell whether it differs in other respects in plumage, without having specimens from Europe to compare with it. But in comparing its head with that figured by Wolf in Gray's 'Genera' I notice that in ours the beak is much more bent upwards, and is strongly hooked at the tip of the upper mandible, instead of being straight. Wolf's sketch, however, is evidently from a dried skin, as it does not show the roundness of the forehead and crown which most sea-birds possess before the fleshy pads above the eyes are removed by the knife of the stuffer.

RECURVIROSTRA SINENSIS, sp. nov.

Arrangement of black and white apparently the same as in *R. avocetta.* Lower eyelids white. Back of lower neck and upper back light ashy-grey, the feathers with paler edges. Tail of twelve feathers, the two outer ones on each side white, the rest light pearl-grey, edged with white; the two middle ones marked at tip with a broken blackish-brown spot, the next on each side less conspicuously so; the greyish feathers with more or less brown on their shafts. Round the coccygeal protuberance a curious tuft of short brown feathers occurs, which is concealed by the overlapping white feathers of the rump. This tuft I do not see noticed in any books of reference on the allied species, though it is remarkable enough. Length of female 17·25 in., tail 3·7 in.; under tail-coverts as long as tail, upper tail-coverts ·75 in. short of tail-tip. Wing 8·75 in., tertiaries ·75 in. short of quill-tip. Closed wing reaching to ·25 in. from tip of tail. Bill from gape to hooked tip 3·5 in., from forehead ·2 in. shorter. Bare tibia 2·3 in., tarse 3·4 in., middle toe and claw 1·7 in.; middle and inner claw falcated internally, outer toe much longer than inner, hind toe well raised and very diminutive. Legs, feet, and webs throughout a delicate bluish-grey, with bluish-black claws; soles of feet tinged with buff. Iris deep reddish-brown. Bill brownish-black.

Dissection, ♀. Cluster of numerous small eggs. Right cæcum 2·5 in., from anus 2·25 in. long; left cæcum ·2 in., nearer anus ·7 in. longer, both worm-like. Proventriculus smooth, ·8 in. long by ·6 in. wide. Gizzard covered with fat, rounded, 1·25 in. long by 1 in. broad, and ·7 in. deep, flattened at sides with strong tendons; epithelium thick and leathery, containing green mud-like ooze and several moderate-sized pebbles. Intestine 2 ft. 9 in. long, from ·3 in. to ·4 in. thick, without any maggot-like cæcal appendage.

The other bird, a male, was not noticeably different in size. It had white testes ·3 in. long by ·1 in. thick. Gizzard contained pebbles of different rock substances, with remains of the smaller crustaceans. The trachea, not different from that of female, was ·2 in. wide below *glottis,* bulging to ·45 in., again contracting to ·25 in., and finally forming into a lower larynx; wings rather broad. Bronchi short.

Feb. 7th.—Received a Hare, a Pheasant, and two Partridges from Chefoo. The Hare is a good deal like our English Hare, and is quite another thing from *Lepus sinensis.* The Pheasant has a broader white neck-ring, and is paler and bluer on the wing-coverts than our southern *Phasianus torquatus.* The Partridges are the *Caccabis chukar,* and agree with the Himalayan birds almost to a feather. It is curious that the light grey-blue drops on the scapulars, so beautiful in this species, and so exquisitely contrasting with the madder red-grey tint of the remaining parts of each feather, are not noted by either Dr. Jerdon or Dr. Bree. Length of bird 14 inches; wing 6·5 in.; tail 4·1 in., of fourteen feathers, graduated. Wing reaching to 2·8 in. from end of tail.

My hunter returned from the interior with a live Porcupine, certainly distinct from any of the known species, and with skins of the following Mammals:—*Viverra zibetta, Canis procyonides, Helictis moschata,* and of a beast like a large Mangouse, which, thanks to Dr. J. E. Gray's excellent Monograph of the *Viverridæ* (P. Z. S. 1864, p. 568), I have made out to be *Urva cancrivora,* Hodgs. He brought only a few birds, among which were two skins of a fine new species of the never-ending genus *Garrulax,* and a skin of what I take to be a young male of *Pericrocotus speciosus.* I can find none of Dr. Jerdon's species to match this *Garrulax*; and as I only know of two, the *G. perspicillatus* (Gmel.) and the *G. chinensis* (Scop.), besides the "Hwamei," from this part of the world, I will bring my new friend before the reader as

GARRULAX SANNIO, sp. nov.

Length of skin 8 inches. Bill from forehead ·75 in., from gape 1·1 in. The other specimen is a trifle smaller, though similarly coloured, and may be a female. Tail 4·4 in., of twelve much graduated feathers, the outer ones being 1·1 in. shorter than the middle. Wing rounded, 4 inches long, the fifth, sixth, and seventh quills nearly equal and longest. Tarse 1·3 in. Legs and claws large and strong as in *G. perspicillatus,* a much larger bird, which it resembles in the orange-buff of its vent. Bill blackish-brown. Toes and claws the same, of a deeper hue, washed with leaden. Forehead, crown, and ear-coverts deep chocolate-brown, the feathers darker in the middle, and those of the forehead somewhat pointed and erectile; vibrissæ and feathers round the eye black. Lores, broad eyebrow, and broad moustache-streak white. The brown of the head blends with the greyish-olive of the upper parts, which latter is greener near the root of the tail; upper back tinged with chocolate cream-colour. Wings light hair-brown, with dark shafts, pale on edges of inner webs, which, viewed from below, give a reddish-white appearance to the closed under wing. Tertials and outer webs of primaries and secondaries same colour as back, lighter on apical portions of those of the outer primaries, showing in some lights almost white; tertials faintly barred. Tail, two middle feathers reddish-brown olive, the rest with more or less light blackish-brown; all with dark shafts and faintly barred. Belly and axillaries buff. Vent orange-buff. Rest of under parts greyish-olive*.

The large *Pericrocotus* differs from the female of Dr. Jerdon's *P. speciosus* (B. Ind. i. p. 419) in having the middle tail-feathers deep black, and not grey. Its quills are black, with an oblique band of rich golden-yellow. Its two middle tail-feathers are rich black, the vent with the greater part of its outer web and the tip golden-yellow; the rest of the feathers golden, with basal portions of shafts and oblique basal bands more or less developed, black. Forehead at base of bill orange-yellow tinged with buff; orange-green to middle of crown. Lower parts deep yellow tinged with green. Tibial feathers greenish-grey. Middle of belly pure white. Occiput, upper back, and scapulars ashy-grey, indistinctly marked with green on scapulars and back. Rump golden-green. Lores shaded with a little black. Bill large, much hooked at tip, black. Some of the tertiary quills with oblong spots of golden on edges of outer webs. Length of skin 7·5 in., wing 4 in., tail 4 in. This does not answer to Dr. Jerdon's female, but may be the young male of *P. speciosus,* which he does not describe. The male tailless specimen I before procured at Foochow I identified in England with the true *P. speciosus* in the East-India Museum.

---

* I saw this new species among the hills on a recent trip up the country, but did not succeed in shooting a specimen. It was in small parties, flying from bush to bush, chattering and uttering a loud call-note, occasionally appearing at the top twig of a bush and erecting the feathers of its head. It was somewhat shy, and in ordinary manners a good deal akin to *G. perspicillatus.*

I see that Mr. Gould (P. Z. S. 1865, p. 665) has made a new species out of the Chinese pied *Henicurus,* the chief peculiarity of his *H. sinensis* being the less extent of white on the forehead. I have three specimens from Foochow varying a good deal in the expansion of this white. I carefully compared my skins with those in the East-India Museum of true *H. speciosus,* Horsfield; and though anxious to find a difference, I could discover none. I suspect that the less or greater extent of frontal white is a sexual difference. Our grey species also seems identical with the Indian *H. schistaceus.*

Feb. 20th.—The Painted Snipe, *Rhynchæa sinensis,* found by a friend abundant on some marshes up the river. He showed me several specimens that he had shot. Rock-Thrushes, *Petrocincla manillensis,* fighting and singing about the green on our hill. Two males fight while the female sits passively by. The combatants ruffle their feathers, stretch their necks, and droop their wings, occasionally jerking up the tail.

March 9th.—Returned from a week's visit to the interior with two birds new to my China list. The first is what looks at first sight greatly like a melanine form of *Lanius schach,* L. I only came across a single specimen, sitting on the top of a bush in a marshy field. It was moving its tail up and down, and from side to side, but uttered no cry. I took it for a peculiar species of *Dicrurus.* It was not known to the natives. The place where it occurred was about fifty miles north-west of Amoy.

Curiously enough, Dr. Giglioli met with the same species on the mainland, near Hongkong. In a letter to me, dated Hongkong, 13th January, 1867, he writes, "The other day I made an excursion over the Kowloon Hills to Tankok, in Mirs's Bay. I shot there a most curious *Lanius*. It is the size of *Lanius schach*, and has the same long tail, but it differs entirely from it in colour. Besides the forehead and sides of the head, *the throat also* is of a deep black. The head, neck, back, breast, and abdomen are of a deep leaden-grey; the wings, tail, and thigh-feathers are of a deep black; the upper and under tail-coverts are of a dusky olive-colour. Can this be a case of melanism of *L. schach*? I doubt it; for in cases of melanism the distribution of colours remains the same, while in my specimen it certainly is not so. The black throat and the olive tail-coverts prove the contrary. In Bonaparte's 'Conspectus' [i. p. 364], amongst the Asiatic Shrikes, is a species named, by the French naturalist Garnot, *L. melas*. Can it be that?" It will be as well to compare Dr. Giglioli's description with that of my bird, for which I propose

LANIUS MELANTHES, sp. nov.

Frontal band, over eye, whole face, and throat black. Thighs axillaries, wings, and tail also black; remiges lighter and browner. Bill and claws black. Iris deep brown. Rest of plumage deep dusky smoke-grey tinged with buff on back, rump, and under parts; reddish-chocolate on vent. Length 9·75 in., wing 4 in., tail 5·3 in. In form very similar to *L. schach*.

Not far from the neighbourhood where the last was procured stood a large Banyan tree with an extended leafless branch. To the tip of this branch flew a diminutive bird uttering a shrill note, somewhat like that of a Titmouse, and began with quick movement to preen its feathers. My companion brought it down with a charge of dust-shot, and, as it dropped senseless into the stream below, I saw by its lively scarlet and peculiar form that it was a *Dicæum*. I was delighted, of course. It turns out to be a male of the "Scarlet-backed Flower-Picker" of Dr. Jerdon (B. Ind. i. p. 373), *Dicæum coccineum* (Scop.), but better known as *D. cruentatum* (L.). We looked and watched in vain for another example. The natives exclaimed at its beauty, and said that they had never seen its like before. Its bill was black. Iris dark bright brown, and its legs blackish-brown.

Curious again! this is the second and only other bird observed by Dr. Giglioli in South China that I had not procured before. Writing to me on the 26th January 1867 from Hongkong, he says, "The other day, amongst some bamboos near Government House, I saw a tiny bird, smaller than *Reguloides proregulus,* which emitted a very peculiar call. I was able to see him distinctly for some time. He had a short tail, slender curved bill like *Certhia,* was greyish-white beneath, green above, with a light crimson-red rump. It looked very like a *Dicæum.* Have any been described from China?" It will be seen that this description answers well to the female of *D. coccineum.*

The country that we visited was not what one would call wooded; but copses and small groves stood about in different directions, chiefly in the neighbourhood of villages. The finest trees that composed them were Pines, Banyans, and the *Liquidambar formosana,* Hance. Every grove had its pair of small Day-Owls, *Athene cuculoides.* They uttered a series of hollow-sounding notes, and were very shy. They had not yet begun to lay. The natives called them the "Small Cat-headed Bird." The higher hills were bare of trees; but the ravines were impenetrable on account of the overgrowth of reeds and long dank grass, amongst which marks of small quadrupeds were frequent, and the odour of Civets strong. Some native hunters brought us a *Viverricula indica* that they had shot. It was a pale example, and had very faint markings. By one copse we saw the fresh dung and marks of a Tiger, and heard much of their occasional visits to the villages, but we came across none. The hunters also brought us a Partridge, *Francolinus perlatus,* which they had shot. We induced them to let us accompany them, and they twice gave us a treat with their dogs. Their hunting-dogs were smaller than the ordinary house-dog of China, known to Europeans as the "Wolf Dog." They were white, with the fleshy parts reddish. Their hair was shorter, and they were brighter-looking than the above watch-dog breed. They were called by the hunters with the singular sounds "Hoo-hŏ-hŏ-hŏ." They picked up the scent and followed it with rapidity through the grass and bushes, their tails wagging with increased liveliness as they approached the game. They yelped only when entangled or in difficulties, and were silent when in view of the game. The hunters followed close on the heels of the dogs, their matchlocks raised, their fuses blown bright, fixed in the trigger, and ready at the shortest notice to fire. The Partridges were usually single, and lay close. They sprang close to the dogs' noses, in fact were poked up. They rose with a rapid flutter and made straight away, the hunters firing before the birds had attained a dozen yards' distance. We did not once see them hit, though they blazed on several different occasions. The arms they used were rude weapons, and we did not wonder at their missing so often. The coarse powder is shaken into the long iron tube which forms the barrel of the gun, and the shot (small irregular bits of iron) shaken on the top of it. The ramrod, consisting of a long stiff reed, appears only to be used to clean out the narrow bore. The only wonder was that they ever did hit the mark, which they do pretty faithfully when the object is fixed. Partridges were by no means common, and we had to walk a long way to put up the few that we saw. Pheasants did not occur. The Partridges ran great distances and the dogs often got the scent on the top of a hill, which they hunted for hundreds of yards, often down into the valley, before they came upon the bird. Their flesh is dry and insipid. We saw a party of Long-tailed Jays, *Urocissa sinensis,* but could not get near them. The natives there call them "Têng-bay-pin." The country was desolate and neglected in many places, not having yet recovered from the visit of the Taipings in 1865. Spots formerly carefully cultivated were now "howling wildernesses;" the smaller animals abounded, and birds were consequently very scarce. The natives shot a good deal, and the little feathered creatures were therefore much scared by the approach of the gunner and the report of his deadly weapon. The hills and woods had nevertheless their wonted charm, and we should not have been in such haste to return to our city life had the skies been more propitious and the gates of heaven withheld their merciful showers. We bought from some Chinese a Garganey, *Querquedula circia,* which would seem from its infrequency on the coast to be quite an inland winter visitant. We saw a male *Ruticilla ferrea,* and many of *Parus minor, Phylloscopus fuscatus,* and *Reguloides proregulus.* The last we heard singing sweetly, and I thought, from its shaking song, that it was one of the Willow-Wrens, until my companion shot it. The song of the *Reguloides superciliosus* simply consists of a hurried repetition of its ordinary call-note. *Calamoherpe canturiens* was uttering its loud "churr" among the bushes, and occasionally bursting out with the few loud, rich notes that constitute its song. The plumage of this bird in spring intensifies and becomes of a deeper hue. Among the same bushes was a smaller bird, which frequently uttered a weaker and sharper "churr," and lay so close that the bush might be kicked before it could be got to leave; and then it would only whisk out and ensconce itself in the next. I managed to procure one fair specimen, but my wretched stuffer neglected to preserve it. I am, however, pretty confident that the species was the *Calamoherpe cantillans* of the 'Fauna Japonica,' which has not before been found to my knowledge in China south of Tientsin. This bird was pretty plentiful among the underwood in every pine-copse. The most noticeable bird on the river itself is *Ceryle rudis,* which flies past uttering its loud peculiar note, sits on the banks in parties of twos and threes, or hovers with bill down-pointed, poised about twenty yards above the water. From its elevation down like a stone it falls into the water and disappears. It returns to the surface, rises, shakes itself, and in most cases flies to land. It occasionally fishes in brackish water, but I have never seen it dip into the sea itself. The little "King of the Shrimps," *Alcedo bengalensis,* usually pounces from a perch; but it sometimes also hovers over its prey, only, however, at a few feet elevation. I have often seen it fishing in the sea. The pied bird is here called "To-he-haw," or "Fishing Tiger;" the little fellow "To-he-âng," "Fishing Reverẹnce," or "the old gentleman that fishes."

March 16th.—Received some Teal from a friend just returned from the marshes. He reports Ducks still, but only a very few Geese. The Teal tasted very fishy, as they always do (in common with most wild fowl) towards the close of the season.

March 17th.—A fine live *Spilornis* brought to me. It had been taken in a net baited with fish at Quemoy, the fellow island of Amoy. Iris fine yellow, with outer black circle or rim to it. This is the first time that this bird has occurred to me in China.

March 21st.—Hen *Euplocamus swinhoii* laying in my aviary one egg every two or three days. Began to lay on the 17th instant.

Aix glocitans, ♂, in the aviary has a short chuckling *gobble* for call-note. The female bursts out occasionally with a loud, harsh, jarring note, calling to mind the cry of some large *Halcyon*. Their voices are far from duck-like.

Lieut. R. C. Beavan says (P. Z. S. 1864, p. 376) that *Copsychus saularis* "builds in bushes." This is remarkable for so genuine a Robin as this bird is. In Amoy I have only noticed its nest in the holes of walls, banks, or houses, oftenest in some corner of the under-roof or beaming of a verandah.

Mr. Blyth, in his most interesting "Commentary on Dr. Jerdon's 'Birds of India,'" for which students of Eastern Ornithology cannot too much thank him, says (Ibis, 1866, p. 256), of *Ephialtes lempiji*, that there are three very similar *dark-eyed* races. "The largest is *E. rufitorques*, Bonap. (Faun. Japon. *Aves*, tab. 8, where it is figured with yellow irides, which I suspect is a mistake)." I have not handled the actual *Scops semitorques* of Japan itself; but the bird we take for it in China I have had under observation several times. I have described the iris of an adult female specimen from Canton thus, "golden burnt-sienna, but so narrow that this colour is seldom visible, the immense pupil filling nearly all the space between the lids" (Ibis, 1861, p. 30). Can this be also the case with the two other dark-eyed races of Mr. Blyth? If not, the Chinese race would seem to be the intervening step that connects the golden-eyed with the dark-eyed races of the variable *S. lempiji*.

March 23rd.—A friend sent me a Kite which he had shot. This note about the bird may be of interest:—*Milvus melanotis*, ♂ adult. Length 23 inches; wing 17·75 in., closed wing-tip from end of tail 1·25 in.; tail 11·25 in., forked, outer feathers 1 in. longer than middle. Breadth of back 5·25 in. Legs and toes clear bluish-white, with dusky-buff soles and bluish-black claws. Irides hazel-ochre. Cere, basal edge of upper mandible and half of lower, inside of mouth, rictus, and lores bluish-white; culmen of cere faintly tinged with yellow. Apical portion of bill black, fading towards the middle. Tongue flesh-coloured, uniformly broad, and deeply sulcated down the middle. Tarse feathered in front for nearly half its length. Skin round the eye, or eyelids, blackish-brown. Ear-coverts and a narrow supercilium rich blackish-brown. Ear-covert large, horizontally oval, and placed well behind line of eye. Besides small lice, the feathers harboured a species nearly half an inch long.

Tracheal rings narrow, with wide membranous interspaces; lower larynx composed of three partly split, open rings meeting in an angle in front; bronchi formed of half rings, with only membrane on lower surface. Body fat and greasy. Testes ·7 by ·15 in., pointed at upper end, blunt and thicker at lower; right one a good deal the smaller. Proventriculus long and smooth. Stomach an oval fleshy sac, without much muscle. Two egg-shaped cæca ·3 by ·15 in. occur in the intestine about 2·25 in. from anus. Intestine ·2 to ·5 in. thick, and somewhat long.

The *Spilornis* that I had alive raised and depressed the occipital part of his crest only, and looked full at me. It seems to be the same as the Formosan

Spilornis hoya. ♂ nearly adult. Length 28·5 in.; wing 19·5 in., tip of closed wing to end of tail 1·5 in. Breadth of back 6·75 in. Tail 12·5 in., somewhat graduated and rounded. Legs dusky-ochre, much lighter on the toes and soles, the hexagonal scales of the tarse and basal half of toes having a whitened or scurfy appearance. Large scutes occur toward the extremities of the toes. Claws large, blue-black. Tarse very long, toes very short. Chin and face black. Under parts lighter than in Formosan bird, with more numerous and perfect spots. Irides, skin round eye, lores, cere, rictus, and base of lower mandible opposed to cere fine bright yellow. Outer ring of iris and outward corner of eye black. Eyelids brown, with strong eyelashes both above and below. Strong black bristly hairs also on lores, cere, and chin. Basal third of bill proper light leaden, apical two-thirds black, browner towards middle of bill. Inside of mouth bluish flesh-colour in its depths; tongue of nearly uniform breadth, concave, and rounded at tip, on its under surface horny and brown. Ear-covert about ·45 in. in greatest diameter, oval; longest axis inclining obliquely towards rictal angle; placed behind line of eye.

Trachea with wide membranes between rings. Lower larynx composed of three narrow rings close set, and angulated in front. Bronchial rings only half, with membranes underneath, the intermembranes between rings wider than in trachea. Testes ·5 in. long, and very thin. Cæca short and adnate, about ·25 in. long by ·1 in. wide, and about 2 inches from anus. Intestine watery and thick, from ·3 to ·5 in., somewhat short. Proventriculus long and smooth. Gizzard fleshy, oval, and with little muscle.

March 24th.—Sent a man to Pagoda Island, to which most of our Kites resort to breed on its cliffs. Kites are early breeders here; but as I saw a pair only a day or two ago treading on the yard of a ship in harbour, I was in hopes that some nests might be found to contain fresh eggs. The man returned with two eggs only, saying that many of the nests were inaccessible, and most were empty or contained young. I left the eggs on a table in my room for four days, when I attempted to blow them. They both contained live young, nearly advanced enough to emerge. My man asserted positively that he had taken them from different nests. Kites frequent this island in large numbers. I have counted as many as sixty hovering over it at the same time. Crows (*Corvus torquatus*) are even earlier breeders than Kites. I saw fully fledged young a month ago.

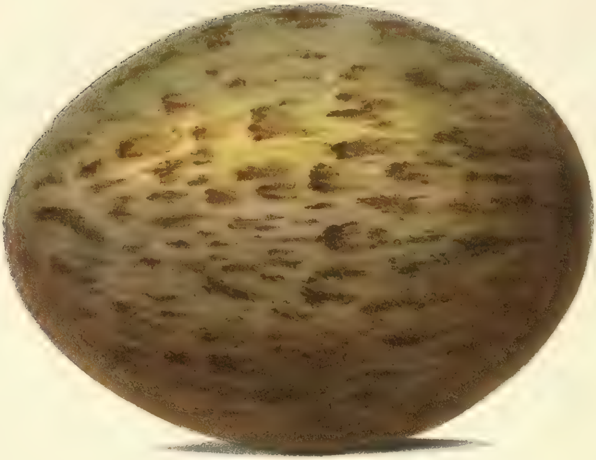
In the first week in March I saw the first Swallow (*Hirundo gutturalis*); and in the middle of March the Cockchafer (*Melolontha*) swarmed in the evening, buzzing about every plant and tree.

March 31st.—Commander Broad, R.N., of H.M.S. 'Cormorant,' on his return from Formosa (Taiwan and Takow), presented me with a live *Poliornis poliogenys* which he had caught on board his ship about twenty miles out of Amoy, on his way across. He says that some twenty or thirty of these birds came about the ship about 2 A.M. that morning, alighting on the yards and tops. They remained till daylight, when they made off, apparently in a northerly direction. The weather was calm and misty. It is curious that these birds should prefer to make their migrations over sea, when the land is so near and so much easier for them to travel along.

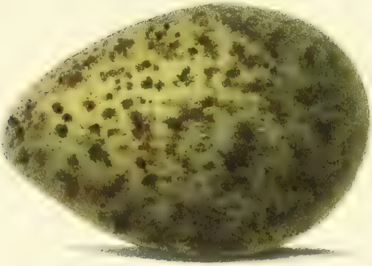
Poliornis poliogenys, ♀ nearly adult. Length 17·5 in.; wing 13·4 in., almost extending to tip of tail. Tail rounded, of twelve feathers, 8 inches long. Tarse 2·5 in., feathered for about ·3 in. down; middle toe and claw 1·75 in.; inner toe shorter than outer with largest of fore claws; hind claw somewhat larger. Legs and toes orange, sole-pads dingier; claws blue-black and sharp; middle claw with the inner edge projecting and cutting. *Iris bright clear yellow,* with a black outer circle. Eyelids, culmen of cere, base of upper mandible, rictus, and basal sides of lower mandible fine chrome-yellow, tinged with orange. Lores advancing on bill, greenish-yellow, scattered with fine blackish bristles. Bill brownish-black, with a central zone of whitish at edge of cere, distinct, and not blending with apical black. Roof of mouth bluish, rest of the inside flesh-coloured. Tongue sulcated, narrowed towards tip, fleshy above, bluish-horn below. Feathers supported a large louse somewhat similar to that on the *Milvus melanotis* above mentioned.

Rump, thighs, and belly covered with orange-coloured fat. Trachea and bronchi with rings set well apart, membrane between; on latter only half rings; larynx composed of several fine rings coalescing in rear and disconnected in front. Ovary with large cluster of eggs; oviduct wide and laid nearly straight. Two white minute oval cæca, about ·1 in. long, occur on the intestine, about 1·4 in. from anus. Intestine about 22·5 in. long, from ·1 to ·25 in. thick. Proventriculus long and smooth. Stomach oval, somewhat flattened at sides, greatest diameter about 1·3 in.; lateral tendons pretty strong. Epithelium furrowed lengthwise, and coated with bright green oozy matter, otherwise empty.

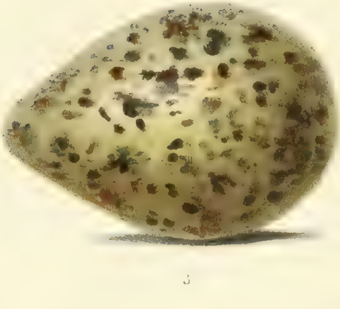
Poliornis teesa (Franklin) has, according to Dr. Jerdon (B. Ind. i. p. 92), the "iris pale brown or dun in the young bird, stone-white in adults." Compare this with the colour of the iris as above noted in our bird.



1



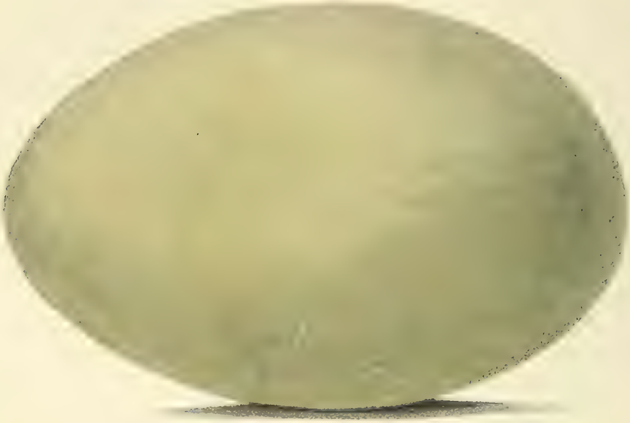
2



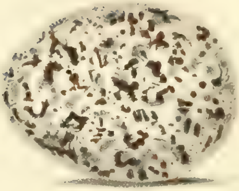
3

Harriet [illegible] del.

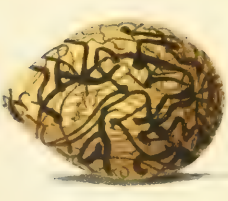
[illegible] imp.



1



2



3

Harriet [illegible]

[illegible] Leigh imp.

In conclusion, I might as well mention that I have just heard from M. Armand David, the Missionary at Peking. He tells me that he has returned from his zoological campaign with only a very few new species of birds. He says the western region is poor in species. From the Peking Province he has procured *Vultur monachus, Grus monachus, G. virgo,* and *Ibis nippon.* He several times saw *Gypaetus barbatus,* but did not succeed in killing it. He has noted no less than 296 species in the north of China. Dr. Giglioli, before leaving China, was kind enough to send me a list of all the birds that Prof. De Filippi and he had collected and observed. He said he would publish notes on them in 'The Ibis.' I will therefore not forestall him by alluding to his discoveries.

Amoy, 15th April, 1867.

XXIV.—*Illustrations of Australian Oology.*

By Edward P. Ramsay, C.M.Z.S.

(Plates VIII. and IX.)

1. Biziura lobata (Shaw). (Plate VIII. fig. 1.)

This anomalous form of the *Anatidæ,* although by no means rare, is usually difficult to obtain, on account of its extreme wariness and great power of diving and remaining under water for an incredible space of time. The Musk-Duck frequents alike the lakes, lagoons, rivers, and even the creeks and water-holes—in fact, wherever it can find a sufficiency of food, which consists of *Uniones* and other freshwater mollusks, with the seeds of the water-lilies and other aquatic plants. These Ducks are, for the most part, met with in pairs only; and sometimes a single bird may be found taking possession of one particular water-hole, where it will remain, if unmolested, the whole year round. I have, however, in two instances, on the Murrambidgee River, met with small flocks, one five and the other seven or ten in number. They seldom take wing; only upon a few occasions have I seen them do so, and these when they have been fired at and wounded mortally. One, which I had come upon suddenly with a charge of shot from behind a rock, seemed so surprised, that, instead of diving, it took wing and, after flapping along the water for about a hundred yards, rose up to the height of ten or twenty feet, and then, skimming the surface of the water, again settled with a considerable splash. Such are the only instances in which I have seen them on the wing. Their chief mode of progression in the water is by diving and swimming with the head and part of the neck alone above the surface. I have frequently watched them coming in to land from the middle of the lake by long dives until near the edge, where they would search for food, and, as I afterwards found, swallow the *Uniones* whole without injuring the shell, though some of them were fully an inch in length. *Nyroca australis* has also the same habit of bolting live mussels in this most unceremonious manner, and, like the *Biziura*, often swims with the body sunk in the water. When suddenly flushed, the Musk-Ducks not unfrequently dive with such force and quickness as to throw up the water with their stiff-quilled tails to the height of three or four feet, just as if a large stone had been thrown into the water without causing any noise.

The breeding-season begins in August, judging from the size of young birds shot in the month of December, and continues to the end of October and November.

I believe that the musky smell which the male bird emits during the summer months is confined to that sex, and in some individuals is retained throughout the whole year. I have never, even in the breeding-season, shot a female which had any smell of musk about the skin. The nest is placed among the rushes, reeds, and weeds on the banks of the small islands in the lakes and lagoons. It is composed of aquatic plants, leaves of the reeds, flags, and the like, and lined with a few feathers. The eggs are usually two in number, of a pale olive colour, 3·2 in. in length by 2·1 in. in breadth. The shell is minutely granulated, rough, and very strong.

2. Pitta strepitans, Temminck. (Plate VIII. fig. 2.)

This species is found plentifully in the dense "brushes" of the Clarence and Richmond Rivers; and that I believe is its nearest habitat to Sydney; while to the north its range extends to the Albert River, and doubtless further on along the coast, wherever places suitable to its mode of life are to be found. It frequents the thickets and densest parts of the scrubs, and, were it not for its loud, liquid call, would seldom be found even when searched for. I know of no bird more elegant, and which trips over the fallen leaves and logs, or threads its way through the tangled masses of vegetation, with such grace and ease as *Pitta strepitans.*

By means of its note, which is easily imitated in trying to whistle the words "want-a-wat(ch)," the bird may be called up within a few feet of its pursuer. I have frequently called it to me and watched its graceful motions as it would hop on the dead logs, roots, and spurs of the trees, run along for a few yards, then stop and call, and appear greatly excited at not finding its supposed mate. The Pitta is seldom seen off the ground or logs; but sometimes an odd one may be seen perched ten or twenty feet high, calling loudly, as if for amusement. I never saw the Pittas take wing when flushed from the ground; but running noiselessly away with all possible speed, they are soon hidden from view.

At times, when seated on a log to rest myself, one has come in sight, walking cautiously along, now running for a few yards, then stopping short, and picking up some unhappy *Helix* which it has discerned by the side of a log, then, with a sharp rap against the first hard substance it sees, breaking the shell and devouring the animal. Those who have traversed the brushes frequented by the Noisy Pitta must have noticed stones against which numbers of land-shells have been broken: these are the work of this Pitta; for when it has found a shell not easily broken it runs off with it to the nearest stone, and there, by holding it in its bill and rapping it against the stone, soon effects its purpose. I have found a considerable collection of broken shells upon several occasions, consisting of six or eight species, and among them the large *Helix fraseri.* The cracking-stones of the Pittas will give a collector a very good idea of what shells occur in the vicinity; and several new and rare species, not hitherto found on the Richmond River, were discovered through the industry of *Pitta strepitans.* The Regent-bird (*Sericulus melinus*), too, I have no doubt, frequently visits such stones, to obtain ornaments for its bowers*. Stones are not common in many parts of the brushes, and when a Pitta finds one it seems to make the most of it. This species appears to live well in confinement. Mr. J. Macgillivray informs me that he kept one in a cage for some time—at first breaking open the snail-shells he gave it; but after a few days he furnished it with a supply of *Helices* and a stone, which it at once made use of to break them against.

Specimens of *Pitta strepitans* †, if it really be the same species, from Cape York, in North Australia, differ greatly in size from the New South Wales birds, being very much smaller and more slightly built, except in the bill; but the chief difference is in the *white spot on the primaries*, which in the North-Australian examples extends over two feathers only, while in the New South Wales birds it is conspicuous on three—the fourth, fifth, and sixth primaries. Mr. Macgillivray, who has made himself acquainted with the habits of the birds in both districts, informs me that they do not differ either in the mode of nidification, the colour of the eggs, or the call-note. I do not wish to argue in favour of making the North-Australian bird a distinct species; still it would be quite consistent to do so, if we admit the *Geopelia placida* of North Australia to be distinct from the *G. tranquilla* of New South Wales, solely because one is smaller than the other; for, as Mr. Gould himself says, the first "is so precisely the same in colouring" as the second "that a description of it is quite unnecessary" (Handb. B. Austral. ii. p. 145).

The nest of *Pitta strepitans* is a round dome-shaped structure, having a large opening at the side, composed of roots, sticks, and twigs, with a little moss, and lined with rootlets, mosses, and a few feathers. It is usually placed upon the ground, but sometimes a few inches from it, in the angle which the "spurs" make with the stems of the trees, or some other suitable place. The eggs are four in number; in length from 1·2 to 1·3 in. by ·9 to 1 inch in breadth. Their ground-colour is of a delicate white, in some specimens bluish-white, having elongated, irregularly-shaped spots of brown and blackish-brown evenly dispersed over the whole surface, with obsolete spots of bluish-grey, which are usually largest on the thicker end of the egg.

---

* [See Mr. Ramsay's letter on this species in the present number.—Ed.]

† I have lately been shown by Mr. Krefft, Curator of the Australian Museum, a specimen of *P. mackloti* from Cape York.

A second variety of the egg of this bird, one of which is usually found in a set, is much more elongated in form than the subject of the figure, and has the whole of the thick end freckled with minute dots of bluish-grey, without any other markings, save here and there a small blackish dot. Length 1·6 in.; breadth ·9 in.

3. PARRA GALLINACEA, Temminck. (Pl. VIII. fig. 3.)

The eggs of this species are among the most beautiful of any laid by our Australian birds. The curious labyrinthine markings which characterize them, however, are not altogether confined to the eggs of the Parra; and, while the eggs of at least three of our species of *Pomatostomus* are beautifully marbled and veined in the most delicate manner, we have those of an Australian grallatorial bird which surpass them all in the peculiarity of the markings. I know not whether I have anything further to communicate respecting the *Parra gallinacea* than has already appeared in my former notes upon the subject (Ibis, 1865, pp. 305, 306), wherein I described the eggs, one of which forms the subject of the accompanying figure (Plate VIII. fig. 3). I may mention, however, that the Parra, although usually a resident throughout the whole year in those parts of the country which it inhabits, sometimes disappears most marvellously, as I found to my cost during a recent trip to the north part of the Richmond River; for on searching the ponds, lakes, and lagoons in these districts, where during the previous year (1865) this species was extremely abundant, we did not succeed in finding a single specimen. Day after day we continued our search, until finally obliged to leave without effecting our purpose. This is the more remarkable as the Parra is a bird of very limited powers of flight. The eggs are four in number. Their shell appears to be very strong, and has the same smooth glossy feeling when handled that characterizes the eggs of *Excalfactoria australis* and *Perdix cinerea.*

4. CHORIOTIS AUSTRALIS (J. E. Gray). (Plate IX. fig. 1.)

The eggs of the Australian Bustard are still rarities in our collections, although the birds themselves are by no means scarce. On the borders of Lake Bathurst and Lake George, on the Goulburn and Sass Plains, and other places suited to their habits, Bustards are still to be found, although they have long since become almost extinct within a hundred miles of Sydney. Always wary, these birds are difficult to approach, a great deal of manœuvring and stalking being necessary to obtain a successful shot. On horseback, or in a light vehicle, they are more easily approached.

During August and the three following months the Bustards betake themselves in pairs to the thinly-wooded districts for the purpose of breeding, returning to the plains and more open land in December, when they associate in small flocks of from five to ten in number. On very hot days they may with more certainty be found on the edges of the plains, in the shade of the trees, returning again in the evenings to their favourite feeding-grounds on the slopes and hillsides.

During the winter, they are found more often on the slopes among the trees, sheltered from the wind and snow.

On the 8th of March, 1866, while at Lake George*, three young Bustards, about the size of a large domestic fowl, were seen together. Although on the same flat there were several old birds, they never accompanied them; and I have been informed by several residents in that district that the young always leave their parents when a few months old.

The Australian Bustard breeds during September, October, and November, and lays but two eggs, on the ground, without any nest—a small bare spot being selected among the trees on the hillside; a few small sticks and blades of grass are sometimes found gathered round the eggs. The eggs vary both in shape and size: some, like the figure (Plate IX. fig. 1), are thickest at an equal distance from the ends; others are more elongated, and widest an inch from the thicker end. In length they are from 3 to 3·3 in., and from 2·1 to 2·3 in. in breadth. The ground-colour varies from light olive-green to olive-brown, having longitudinal smears, spots, and dashes of olive-brown, equally dispersed over the surface. In a valuable collection, for which I am indebted to my brother, Mr. J. Ramsay, of Nanama, there are seven Bustard's eggs; one particularly fine one measures 3·3 by 2·1 in.; it is of a light olive-green sparingly marked with reddish olive-brown.

---

* [For some further remarks by Mr. Ramsay on this species in the district mentioned in the text, *vide antea*, pp. 134, 135.—Ed.]

The figure represents the most usual form of eggs found on the Lachlan River, while all those obtained by my brother are much more elongated. The smallest Bustard's egg in our collection measures 2·3 by 1·6 in., and is of an olive-brown, thickly spotted and dashed with dark olive-brown. I have seen small eggs of the same colour with very few and faint longitudinal markings, extending nearly the whole length of the egg: these I take to be the eggs of the younger birds. So far as I am aware, the Australian Bustard has but one brood in the season.

5. LOBIVANELLUS LOBATUS (Latham). (Pl. IX. fig. 2.)

This species has long since become scarce, if not quite extirpated, in the neighbourhood of Sydney, although plentiful some fifty miles inland. It shows a decided preference for the marshy parts of the country, on the borders of lakes, swamps, and lagoons, and the grassy margins of rivers. On the edge of Lakes Bathurst and George, and Hexham Swamps, they are particularly numerous.

During the daytime they are mostly found in flocks of from five to fifty in number, perhaps crowded together on the edges of a lagoon, basking in the sun, or on remarkably hot days under the shade of some tree. Night is the Plovers' time for feeding; they then become remarkably noisy, and their loud creaking choruses, sometimes carried on by two or three individuals, are more often heard. A sudden stop puts an end to the performance, when all is again quiet, and nothing heard save a melancholy call-note as they follow one another in twos and threes to some distant part of the fields. They are seldom heard in the daytime, except when disturbed.

The Spur-winged Plover breeds during September and the two following months, in some localities a month earlier or later. The eggs, which are four in number, are placed with the thin ends inwards, and laid upon the ground by the side of some tuft of grass or rushes, in a slight hollow made for their reception, with occasionally a few blades of grass placed under and around them, but as often as not without any sign of a nest.

The ground-colour of the eggs varies from yellowish- and olive-brown to bright deep olive-green, strongly marked with spots, dots, and irregularly shaped blotches of dark blackish brown, and yellowish brown, which latter appear beneath the surface of the shell, the majority of the markings being towards the larger end. They vary from 1·9 to 2 inches in length, and from 1·3 to 1·4 in. in breadth. My brother has given me a most beautiful set of the eggs of this species, in which the ground-colour is of a bright deep olive-green, evenly spotted with deep blackish-brown. The Spur-winged Plover shows great anxiety for its eggs and young, fluttering off as you approach and using all the enticing actions in its power to draw you away from the spot; should a horse, a cow, or any other quadruped approach, it uses quite different means to save its treasures; and by flying up in the beast's face, and flapping it with its wings it quickly produces the desired effect.

6. SARCIOPHORUS PECTORALIS (Cuvier). (Pl. IX. fig. 3.)

The habits and actions of this pretty species closely resemble those of the Spur-winged Plover; it breeds during August and the three following months, laying its eggs on the bare ground in places similar to those chosen by the last-mentioned bird, but is more local, and frequents drier tracts of country. I have frequently met with flocks in the ploughed fields, where they would be found sitting down and basking in the sun, or in a long string in the shade of a fence. In their flight they differ greatly from their ally, and are seldom heard except when flushed or separated. At night they separate and spread about over the fields in search of food.

The eggs of this species are four in number, 1·7 in. in length by 1·2 in. in breadth. Some specimens vary to the extent of a tenth either way. The ground-colour is a light olive-brown, tinged with yellowish- or greenish-olive, spotted with brown and grey, which latter appears beneath the surface of the shell. In some the spots incline to reddish brown, and are equally dispersed over the whole surface; in others the markings are crowded on the larger end.

The note of *Sarciophorus pectoralis* is a shrill cry of "kĕry kĕry," repeated several times in quick succession.

XXV.—*Notes on the Birds of Tangier and Eastern Morocco.*

By C. F. Tyrwhitt Drake.

The following few notes, on the birds which I observed in the neighbourhood of Tangier during my stay there from January to the beginning of April last, may not be without interest, as that part of Africa has not received much attention from ornithologists. The country immediately around Tangier is not so good for a collector as that near Tetuan, which lies at the foot of a northern spur of the Atlas, rising there abruptly from the plain to an elevation seemingly of six or seven thousand feet, though unfortunately I had not any instruments with me to ascertain its real height. These mountains are in many parts well wooded; and the Andalusian Quail, Woodpeckers, and Owls are abundant, while on the rocky cliffs Eagles, Vultures, and Hawks breed in numbers. Nearer the town, orange-groves extend almost without interruption for two or three miles, watered by a stream abounding in trout; and here the Dusky Ixus literally swarms, while the gardens are the chief haunts of the various Warblers, which delight in the shelter afforded by the cane-hedges. Wild-fowl are plentiful in the marshes at Martine, the port of Tetuan, about eight miles distant, as well as Crakes, Egrets, and other marsh-fowl.

Of the Eagles and Vultures, few remain in Morocco during the winter, but most come in flights from the south-east and south between the 15th and 20th of March, almost invariably during an easterly wind. Alpine Swifts make their appearance at the same time; but the Bee-eaters and Rollers do not generally come till the middle of April. Most of the Hawks and Buzzards remain during the winter, and are very plentifully scattered over the whole country; yet notwithstanding these, as well as other two-legged and four-footed foes, there is an abundance of game, consisting of Barbary Partridges, Snipes, and Wild-fowl, besides a few Hares, of which there are two species, so distinct that even the natives have different names for them. Rabbits also are found on the hillsides. Quails and Little Bustards make their appearance in the corn-fields at Tangier in April and May.

The Rîf country, which lies along the coast east of Tetuan, would probably be full of interest to the naturalist, as, from what can be gathered from the Moors, it is in many parts still virgin-forest; but as yet no European has ever been able to explore it. The people, who seem to be a distinct race from the Moors—having much fairer complexions, and speaking a dialect which varies from the Mogrebbin or Moorish Arabic—are very warlike, continually fighting among themselves and murdering any wretched Moors or Jews who happen to fall into their clutches. They are extremely jealous of strangers setting foot in their territory; and in fact it seems impossible for any one to do so; for though they are called subjects of the Sultan of Morocco, his power over them is scarcely more than nominal. In these forests a large wild beast is said to live, the description of which answers in many respects to that of a Bear; but its existence is rather mythical, as no reward has hitherto been able to tempt the hunters to produce its skin. The Barbary Ape, however, is very plentiful on the precipices and wooded hillsides.

Along the coast to the west of Tangier are several alluvial plains, which, in a few places, are formed into lakes by the mouths of the rivers passing through them becoming silted up by the sand drifted from the sea-shore. These are the chief resorts of the water-fowl: amongst them the commonest is the Buff-backed Heron, which, during the early part of the winter is found scattered about the plains, feeding among the cattle or picking insects off their backs. At this time it is extremely tame, but as the spring advances, collecting in flocks previous to migrating to its breeding-grounds (which I believe lie in the marshes of the interior south-west of Tangier), it becomes one of the most difficult birds to approach.

There are many wild beasts to be found in this district. The Wild Boar is still plentiful on the hills, where he makes his lair in almost impenetrable thickets of gum-cistus and heather, which latter grows frequently seven or eight feet high; a Lynx) in Moorish "Oud-al"—*Felis caracal,* I believe) and the Jackal are also to be found there, though the former but rarely. In the more open country are found the Ichneumon, Fox, Genet, and Barbary Mouse, whilst the Otter is common near the rivers and on the rocky coast. Towards the interior occur the Leopard, Hyæna, and Lion, as well as several species of Antelope. Land- and Water-Tortoises are also very common.

As a rule the Moors are not of much use for collecting. They are keen sportsmen and indefatigable hunters, but they look upon the shooting of small birds as beneath their dignity, and cannot understand why so much trouble should be taken for a, to them, useless object. Yet when they see one anxious to obtain any particular specimen, they will do all they can to help, and with a little trouble they would make invaluable assistants. They are so quick-sighted that they will constantly detect Partridges or Hares crouching in a thick palmetto-bush, where it is often very difficult to see them even when one knows that they are there. For information about many of the birds I am indebted to Mr. Green, Her Majesty's Consul at Tetuan. I am also largely indebted to Sir J. H. Drummond-Hay, Her Majesty's Minister in Morocco, for very many acts of hospitality and kindness, among others for having procured for me with great trouble the specimen of the large Bustard mentioned below.

VULTUR FULVUS, Linn. Common at Tetuan. I saw several towards the end of March, and I believe that some remain there all the winter.

NEOPHRON PERCNOPTERUS (Linn.). "Sew." Common. Breeds near Tetuan. Passes over Tangier in a northerly direction, when there is a strong easterly wind, about March 15 to 20. I saw one that was shot on March 4th about twenty miles west of Tangier.

AQUILA CHRYSAETUS (Linn.). Breeds at Tetuan, though in no great numbers.

AQUILA BONELLII (Temm.). Breeds at Tetuan sometimes, and also at Cape Spartel.

Aquila pennata (Gmel.). Has been seen a few times at Tetuan and Tangier.

Pandion haliæetus (Linn.). Tolerably common along the coast, and breeds there.

Falco peregrinus*, Linn. Common: breeds in the mountains.

Falco lanarius, Schl. I saw a tame Falcon taken at Tetuan, which I believe to have been of this species.

Falco subbuteo, Linn. I saw this bird twice near Cape Negro.

Tinnunculus alaudarius, G. R. Gray. "Sweef." Very common.

Tinnunculus cenchris (Naum.). Passes over during the March migration, but remains all the year at Laraiche. I obtained several specimens thence in February; and it also breeds there.

Milvus ictinus, Sav. "Sewâna." Not uncommon in winter at Tetuan.

Milvus migrans (Bodd.). Breeds.

Elanus cæruleus (Desf.). I shot one at Tangier, and a second at Tetuan. I saw a few others. It breeds on the mountains west of Tetuan.

Accipiter nisus (Linn.). I shot one, February 20th, at Tangier, where it is only seen on passage. It usually does not come till March.

Circus æruginosus (Linn.). Very common.

Circus cyaneus (Linn.). **Circus cineraceus** (Mont.).	Seen on several occasions.

Asio brachyotus (Linn.). **Asio capensis** (A. Smith).	Common.

Athene persica (Vieill.). Plentiful everywhere.

Syrnium aluco (Linn.). I found numbers in caves at Tetuan.

---

* [Qu. *F. barbarus*?—Ed.]

Picus numidicus, Malh.
Gecinus vaillanti (Malh.). } On Tetuan mountains.

Jynx torquilla, Linn. I shot one in a vineyard at Tangier, March 30th. It is rather more ochreous beneath than British examples, and the grey is lighter than in them.

Coracias garrula, Linn. Seen frequently about the middle and end of April. Breeds further down the west coast.

Merops apiaster, Linn. Very abundant. Arrives in the beginning of April.

Alcedo ispida, Linn. Common, and breeds.

Upupa epops, Linn. Arrives about February 20th, and is then to be found all over the country. About April it seems to go further west to breed.

Cuculus canorus, Linn. Arrives in the spring.

Oxylophus glandarius (Linn.). I saw one at Tangier January 10th, and on the 15th shot one. I shot another at Tetuan March 15th.

Caprimulgus europæus, Linn.
Caprimulgus ruficollis, Temm. } Known to breed towards Ceuta.

Cypselus melba (Linn.). Only seen on passage.

Cypselus apus (Linn.). Plentiful in summer.

Hirundo rustica, Linn. All the year round.

Chelidon urbica (Linn.).
Cotyle riparia (Linn.). } I believe, do not stay the winter.

Cotyle rupestris (Scop.). I saw this at Tetuan towards the end of March, but only in very small numbers.

Oriolus galbula, Linn. Very rare indeed, and only in summer.

Lanius meridionalis, Temm. Common everywhere. On the mountains west of Tetuan I once saw another species, which seemed to be *L. excubitor*.

Lanius collurio, Linn. At Martine in summer.

Lanius auriculatus, P. L. S. Müller. I saw a Woodchat April 2nd.

Telephonus cucullatus (Temm.). Not rare, but very shy. To be found chiefly in the cane-hedges.

Muscicapa atricapilla, Linn. Seen during the spring migration.

Ixus barbatus (Desf.). Very common.

Turdus viscivorus, Linn.
Turdus musicus, Linn. Very common.
Turdus merula, Linn.

Turdus torquatus, Linn. One was killed a few years ago at Tangier.

Petrocincla cyana (Linn.). Common on rocky ground. Often frequents cemeteries.

Saxicola œnanthe (Linn.).
Saxicola albicollis (Vieill.). None of these are rare during passage.
Saxicola stapazina (Linn.).

Pratincola rubetra (Linn.). Two have been shot at Tetuan.

Cyanecula leucocyanea, Brehm. Very shy, and consequently little seen, but not rare. This is the form with the *white* breast-spot.

Sylvia orphea, Temm. At Tetuan, rare.

Sylvia conspicillata, Marm. Shot in the salt-marshes at Martine in March.

Sylvia melanocephala (Gmel.). Very common.

Melizophilus undatus (Bodd.). The Dartford Warbler is common on the plains covered with palmetto.

Phyllopneuste rufa (Lath.). At Tetuan, rare.

Salicaria aquatica (Lath.). Shot in March, being then in winter plumage.

Locustella nævia (Bodd.). Shot in March.

Pseudoluscinia luscinioides (Savi). } Rare.
Potamodus cettii (Marm.). }

Troglodytes parvulus. Koch. I saw also a second species of Wren, which Mr. Green had shot. I hope next winter to procure it myself.

Motacilla alba, Linn.

Budytes flava (Linn.).

Parus ultramarinus, Bp. I saw but few, and only succeeded in getting two specimens, both of which I unfortunately lost.

Linota rufescens (Vieill.). In one of my rides I got within a few yards of a bird that I had no doubt at the time was a Redpoll.

Linota cannabina (Linn.).

Chrysomitris spinus (Linn.).

Carduelis elegans (Steph.).

Serinus hortulorum, Koch. Killed at Tangier by M. Favier: rare.

Chlorospiza aurantiiventris, Cab.

Coccothraustes vulgaris, Steph. I saw one that had been shot at Tetuan by Mr. Green.

Fringilla spodiogenia, Bp.

Emberiza miliaria, Linn.

Emberiza hortulana, Linn. In summer.

Plectrophanes nivalis (Linn.). One was picked up dead at Cape Spartel.

Melanocorypha calandra (Linn.). On the open plains.

Galerita cristata (Linn.). } Common.
Alauda arvensis, Linn. }

Calandrella brachydactyla (Leisl.). On the open plains.

Sturnus vulgaris, Linn. Uncommon.

Sturnus unicolor, Marm. More common at Tetuan that at Tangier.

Corvus corax, Linn.
Corvus corone, Linn.
Very common.

Corvus monedula, Linn.
Fregilus graculus (Linn.).
Seen in large flocks together, but only at Tetuan.

Pica mauritanica, Malh. Rabat.

Columba palumbus, Linn. I saw a few flights in March.

Columba livia, Linn. Common on the coast.

Caccabis petrosa (Gmel.). "El Hăjel." Very common everywhere.

Coturnix communis, Bonn. "Souměna." Arrives at Tetuan in March, but at Tangier not till April. Breeds.

Pterocles arenarius (Pall.).
Pterocles alchata (Linn.).
"El Koudri." Rabat.

Turnix sylvatica (Desf.). Seems to be tolerably common.

Porzana maruetta (Leach). I shot two at Martine, March 23rd. They are more freckled with white than European specimens.

Porzana pygmæa (Naum.). Rare.

Porphyrio hyacinthinus, Temm. Found occasionally in the marshes, and, I believe, breeds there.

Gallinula chloropus (Linn.).
Fulica atra, Linn.
Are said to occur on the lakes west of Tangier; but I did not see any myself.

Scolopax rusticola, Linn. "Sou-mirh." Common in winter.

Gallinago scolopacinus, Bp. "Boom-en-ar." Common.

PHALAROPUS FULICARIUS (Linn.). An exhausted bird was brought to me by a boy in January.

TRINGA ALPINA, Linn. Common on the shore at Tangier, in January, but hardly any remained by the middle of February.

ÆGIALITIS CANTIANUS (Lath.).

ÆGIALITIS HIATICULA (Linn.).

SQUATAROLA HELVETICA (Linn.).

CHARADRIUS PLUVIALIS, Linn. }
VANELLUS CRISTATUS, Meyer. } Common.

GLAREOLA PRATINCOLA (Linn.). Occasionally seen at Martine.

CURSORIUS GALLICUS (Gmel.). Rare; arrives in May or June.

HIMANTOPUS CANDIDUS (Bonn.). I saw several.

ŒDICNEMUS CREPITANS, Temm. Common.

OTIS TETRAX, Linn. "Boozerat." Common in summer.

OTIS ARABS*, Linn. A specimen brought from Dar-el-baida, on the west coast, not very far from Mogador.

GRUS CINEREA, Bechst. "Garnook." Seen occasionally.

GRUS VIRGO (Linn.). I shot one at Martine, March 23rd.

ARDEA CINEREA, Linn. "Hameedo-el-wad" or "El Rhabeah." Found on all the rivers.

ARDEA BUBULCUS, Sav. Very common.

ARDEA GARZETTA, Linn. A few usually at Martine in winter.

NYCTICORAX GRISEUS (Linn.). One shot by Mr. Green at Tetuan.

---

* [The specimen obtained by our contributor was submitted for determination to Mr. George Gray, who has most kindly compared it with examples in the British Museum, and informed us that he could not refer it to any other species, though some slight differences were observable. Can it be this species which has hitherto been taken for *O. tarda* in Morocco?—ED.]

Botaurus stellaris (Linn.). Not rare. At Martine, when it is heard booming, the people imagine it to be the voice of a "Jin" portending a bad season.

Falcinellus igneus (Gm.). Numbers come to Tetuan in summer.

Platalea leucoradia, Linn. Very rare.

Ciconia alba, Bechst. "Belarej." Held sacred, as in Holland, and consequently very abundant. I have counted more than sixty together in one place.

Phœnicopterus roseus, Pall. "Nehaf." Very rare.

Tadorna casarca (Gmel.). Shot by M. Favier off Cape Spartel.

Anas boschas, Linn. "El Bourk."
Anas penelope, Linn.
Anas crecca, Linn.
Plentiful on the pools in the open country.

Phalacrocorax carbo (Linn.). I saw one near Cape Spartel.

Sula bassana (Linn.). Common.

Podiceps minor (Gmel.). At the Lakes during the whole year.

Stercorarius parasiticus (Linn.).
Larus fuscus, Linn.
Rissa tridactyla (Linn.).
Chroicocephalus ridibundus (Linn.).
Sterna cantiaca, Gmel.
On the coast in winter; but I do not know if they remain for the summer.

Sterna minuta, Linn. I saw one specimen obtained by M. Favier.

XXVI.—*Notes on various Indian Birds.*

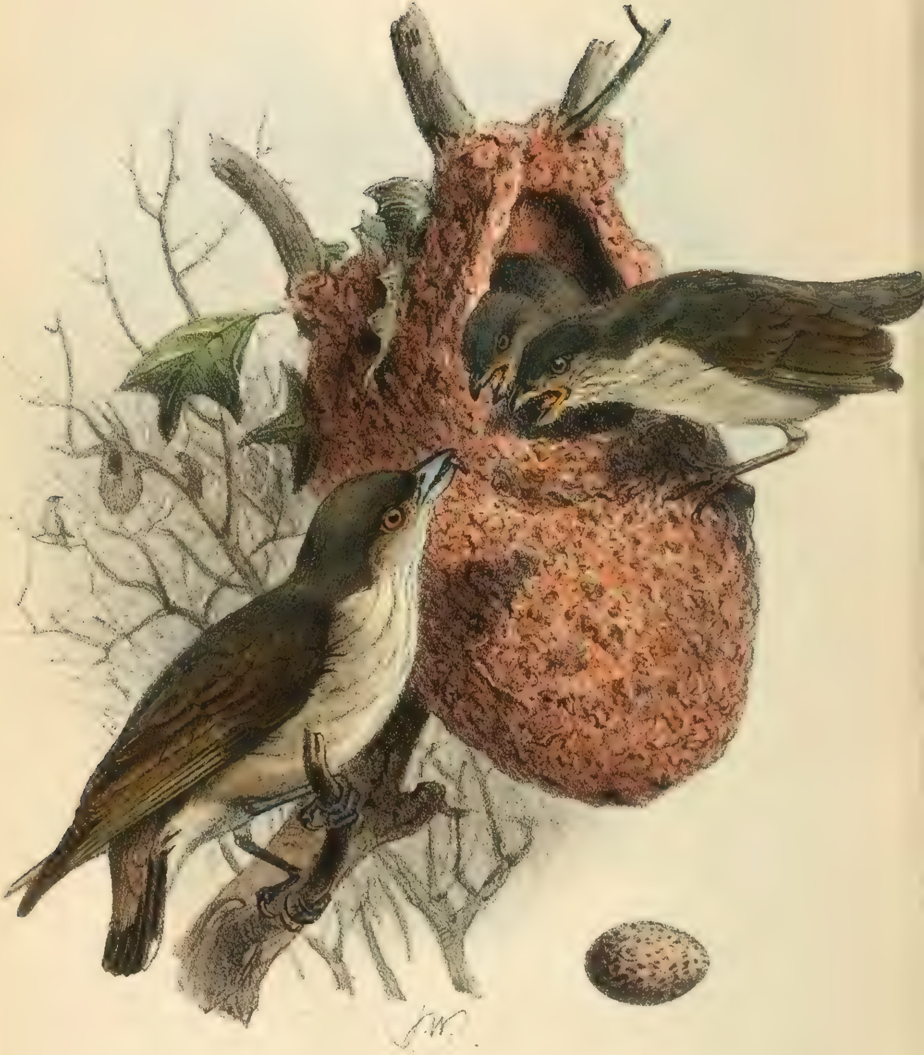
By R. C. Beavan, Capt. Bengal Staff Corps, C.M.Z.S.

(Plate X.)

[Continued from the 'The Ibis' for 1865, p. 423.]

240. **Piprisoma agile.** Thick-billed Flower-pecker.

In addition to my former notes on this species (Ibis, 1865,



J. Wolf lith.

M. & N. Hanhart imp.

PIPRISOMA AGILE.

pp. 416, 417) I wish to say that, according to my observation, it does not, as Dr. Jerdon states, associate in small flocks. I have generally observed it alone; but its dull colours prevent its being easily seen. It builds, I think, most commonly on a shrub of the dwarf " Sakwa " (*Shorea robusta*), or " Sâl " as it is usually called. Its note I should term a " shrill " instead of a " weak " piping, which can be heard at some distance, long before the bird itself is visible *.

376. HETEROMORPHA UNICOLOR. Brown Finch-Thrush.

Darjeeling collection, 1862; procured on the road from Darjeeling to Mount Tongloo, at the height of about 8000 feet. Out of a small party seen hopping about low shrubs and dwarf bamboos near the ground, I secured two specimens, and wounded another, which got off amongst the bamboos.

385. PYCTORHIS SINENSIS. Yellow-eyed Babbler.

Not uncommon in Maunbhoom, where I collected several specimens. It frequents low and thick thorny bushes on the outskirts of heavy jungle. The natives of that district call it " Goolab chesm " (yellow eyes). I obtained it again at Umballah, Nov. 6th, 1866. Length 7·25, wing 2·625, tail 3·875, tarsus 1, spread of foot underneath 1·25, bill from front ·4375, from gape ·6875, extent of wings 7·5 †.

391. STACHYRHIS NIGRICEPS. Black-throated Wren-Babbler.

Darjeeling collection, 1862. Secured two specimens.

392. STACHYRHIS PYRRHOPS. Red-billed Wren-Babbler.

Dr. Jerdon's description of this species is very meagre. I procured two specimens at Simla—one on 10th June, and the other on 5th July, 1866. Dimensions as follows :—

	Length.	Wing.	Tail.	Tarsus.	Spread of foot.	Bill.	Extent.
A....	5	2·125	2	·75	0	·56	6
B....	4·87	2	1·75	·75	1	·437	5·75.

---

* [We are indebted to the author for the loan of the specimens of this species (which does not seem to have before been figured) represented by Mr. Wolf on the accompanying plate (Plate X.). The nest, which has been already accurately described (*loc. supra cit.*), is one of the most beautiful structures we have ever seen.—ED.]

† The dimensions throughout this paper are given in English inches and decimals.

the bill of B being from gape ·625. The only black about the bird is in front of the eye, and a small patch on the throat or chin. The upper parts are greenish-olive, a little brighter on the head; the lower parts light cinnamon-colour, lighter on the ear-coverts and lower abdomen and vent. Irides light red; bill bluish-horny, with a slight tinge of pink. Legs yellowish-fleshy. Wings and tail olive-brown. The feathers of the head are harsh, with black shafts, those of the rump and back being loose and puffy.

393. STACHYRHIS RUFICEPS. Red-headed Wren-Babbler. Darjeeling collection, 1862. Two specimens.

394. STACHYRHIS CHRYSÆA. Golden-headed Wren-Babbler. Darjeeling collection, 1862. One specimen.

395. MIXORNIS RUBRICAPILLUS. Yellow-breasted Wren-Babbler.

Ambekanuggur, Maunbhoom, 1865, where it was found on the banks of the Cossye River, in search of insects among thick shrubs and low trees. In a fresh specimen before me the bill is bluish, especially the lower mandible. Length 5·375.

Procured also in the valley of the Salween River, in Tennasserim (*cf.* P. Z. S. 1866, p. 547). It does not appear to be uncommon in suitable localities; but its skulking bush-loving habits prevent its being often seen.

397. DUMETIA HYPERYTHRA. Rufous-bellied Babbler.

I consider a bird procured at Kashurghur, Maunbhoom, 1864, to be referable to this species.

399. PELLORNEUM RUFICEPS. Spotted Wren-Babbler. Ambekanuggur, Maunbhoom, 1865.

This bird has very skulking habits, frequents low and tangled brushwood, where it makes, or probably several together, a tremendous chattering like the Babblers. One can seldom get a shot at it, although it is not uncommon in jungly ravines near rivers.

Description of a specimen in the flesh, March 3, 1865:—Length 6·625, wing 2·75, tail 2·375, tarsus 1·125. Throat and belly white, striated with brown longitudinal spots on the breast. "Bulbul postha" in Maunbhoom.

400. POMATORHINUS RUFICOLLIS. Rufous-necked Scimitar-Babbler.

Darjeeling collection, 1862. One specimen.

402. POMATORHINUS SCHISTICEPS. Slaty-headed Scimitar-Babbler.

Darjeeling collection, 1862. One specimen.

405. POMATORHINUS ERYTHROGENYS, Gould. Rusty-cheeked Scimitar-Babbler.

Darjeeling collection, 1862. Two specimens.

Not uncommon in the neighbourhood of Simla, where it was the only species of this genus observed by me. Dimensions (June 2, 1866):—

	Length.	Wing.	Tail.	Extent.	Bill.	Tarsus.
A	9·875	3·3125	3·75	10·5	1·25	1·5 nearly.
B	10·125	3·875	3·75	10·5	1·375	1·375

Irides pale yellowish-white; bill horny-green, darker along ridge of upper mandible; legs and claws fleshy.

406. XIPHORHAMPHUS SUPERCILIARIS. Slender-billed Scimitar-Babbler.

Darjeeling collection, 1862. One specimen.

407. GARRULAX LEUCOLOPHUS. White-crested Laughing Thrush.

Noticed in Sikkim, where it was tolerably common at the height of about 2000 feet; again at Kyodan, on the Salween River, in Burmah, August 14, 1865.

Specimen in the flesh:—Length 11; wing 5; tail 4·5; tarsus 1·875; bill from front 1·125. Irides dark red; bill black; legs leaden. (*Cf.* P. Z. S. 1866, p. 548.)

408. GARRULAX CÆRULATUS. Grey-sided Laughing Thrush.

Darjeeling Collection, 1862. Four specimens.

410. GARRULAX RUFICOLLIS. Rufous-necked Laughing Thrush.

Darjeeling collection, 1862. One specimen.

411. GARRULAX ALBOGULARIS. White-throated Laughing Thrush.

Darjeeling collection, 1862. One specimen shot on Mount Tongloo.

At Mahasoo, near Simla, September 25, 1866, I came across a very large flock, which made a tremendous noise when disturbed, squeaking, mewing, and yelling like a lot of cats, and secured two specimens.

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Extent.
A	12·25	5·5	6	1·75	·8125	1·1975	15·5
B	12	5·25	5·75	1·75	1	1·1875	15

spread of foot underneath 2·375. Irides greyish slate. These birds almost invariably get away unless killed dead, and even then are very difficult to find amongst the thick underwood they frequent. Legs plumbeous-green; bill dark horny.

Garrulax chinensis (Scopoli); Walden, P. Z. S., 1866, p. 549. Tennasserim Laughing Thrush.

I shot a female in company with a flock of *G. leucolophus* at Kyodan on the Salween River. Length 10·875; wing 4·5; tail 5; tarsus 1·625: bill at front 1. Irides crimson-red; legs dirty brown; round beak, eyes, upper ear-coverts, and a line down the throat, black; rest of ear-coverts and streak above the black of beak pure white; head dark ashy; back and tail ferruginous-ashy, breast the same hue but lighter.

412. Garrulax pectoralis. Black-gorgeted Laughing Thrush.

Darjeeling collection, 1862. Two specimens.

413. Garrulax moniliger. Necklaced Laughing Thrush.

Darjeeling collection, 1862. One specimen.

414. Garrulax ocellatus. White-spotted Laughing Thrush.

Darjeeling collection, 1862. Found rather plentifully on Mount Tongloo, amongst the small shrubs on the Nepâl side; and not far from the top I secured two specimens.

415. Trochalopterum erythrocephalum. Red-headed Laughing Thrush.

I obtained two females at Fagoo near Simla, August 3, 1866.

	Length.	Wing.	Tail.	Tarsus.	Spread foot.	Bill.	Gape.	Extent.
A.	10·625	3·75	4·375	1·437	1·875	·8125	1·0625	10·25
B.	10·375	3·75	4·375	1·437	1·75	·8125	1·125	10·5

Irides greyish-brown; legs fleshy-pink; bill horny-brown.

It is found frequenting the low and the thick trees of a species of *Ilex* and the patches of thick brushwood on the hillsides. Both this species and *T. variegatum* are found in some abundance on the Mahasoo range, although they do not seem to occur nearer to Simla than it. They are very difficult to procure, owing to their skulking bush-loving habits; one hardly ever shows itself or affords a fair shot for more than an instant. And although there may be several together in one clump of vegetation, they either keep close or, crawling along the ground, rise and fly away out of shot from a quarter least expected. A flying shot is often the only one obtainable, and then is generally difficult because the birds fly so low.

416. Trochalopterum chrysopterum. Yellow-winged Laughing Thrush.

Darjeeling collection, 1862. Three specimens.

417. Trochalopterum subunicolor. Plain-coloured Laughing Thrush.

Darjeeling collection, 1862. One specimen.

418. Trochalopterum variegatum. Variegated Laughing Thrush.

This might with more propriety be called "Cinnamon-vented" or "Black-chinned." The dimensions of a male killed at Fagoo, August 3, 1866, are:—Length 10·5; wing 4·125; tail 4·75; tarsus 1·5; spread of foot underneath 2; bill from front ·8125, from gape 1, extent 11·25. Irides pale green; bill nearly black; legs fleshy-yellow, lighter on soles; claws slaty. Dr. Jerdon's description (B. Ind. ii. p. 45), taken evidently from a skin, is imperfect. The winglet and the first few of the primary coverts forming a small patch at the shoulder, a bar across the middle of the secondaries, and the inner webs of all the wing-feathers are jet-black. The extreme shoulder of the wing *outside* is pure white. The primary coverts next to those that are black are, as mentioned by Dr. Jerdon, rufous. The outer webs of the primaries and secondaries partially above the black cross-band are golden-yellow. The secondaries below that band have their outer webs pearl-grey; the under tail-coverts are cinnamon-colour; the two middle tail-feathers have their basal three-quarters jet-black, and this colour extends over all the other tail-feathers (except the outermost pair) gradually decreasing in extent. The remainder of the middle pair is ashy-grey tipped white; the rest of the feathers of the tail are golden on their outer webs, tending to ashy on the inner, and all broadly tipped with white.

419. TROCHALOPTERUM AFFINE. Black-faced Laughing Thrush.

Darjeeling collection, 1862. Two specimens.

420. TROCHALOPTERUM SQUAMATUM. Blue-winged Laughing Thrush.

Darjeeling collection, 1862. Two specimens.

422. TROCHALOPTERUM PHŒNICEUM. Crimson-winged Laughing Thrush.

Darjeeling collection, 1862. One specimen.

425. TROCHALOPTERUM LINEATUM. Streaked Laughing Thrush.

This is perhaps one of the most characteristic birds that frequent the station of Simla, in the gardens of which it builds its nest. Dimensions as follows:—

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Extent.
A	8·375	3·375	..	1·0625	..	..	8·5
B	8·5	3·25	3·625	1·125	·625	·8125	
C	8·125	3·125	3·75	1·125	·62	..	8·5

Like the English Hedge-Sparrow (*Accentor modularis*), this bird in hopping along the ground gives a flirt with its tail at each hop. It feeds on the ground, in small parties of three, four, and sometimes more. It has all the inquisitive peering and restless habits of the *Malacocercus* group. Sometimes several might be seen to drop down below a tree in the garden in front of my door, and busily hunt for insects among the fallen leaves. They have a rather loud chattering note, and seldom stay long in one place. The song is excessively sweet and musical, but does not last long, and bears some resemblance to the notes of a wind-instrument. The irides are pure clear brown; bill and legs brownish-horny, or light dirty brown. The bill is darker at base, and along the ridge of the upper mandible. The feathers of the head and neck are black-shafted, those of the back are white-shafted, and of the throat and breast rufous-shafted. The plumage, excepting upper and lower tail-coverts (which are loose and puffy), has a harsh spinous feel to the touch. This species is very abundant in gardens and groves about Simla, usually seen in parties of six or seven. When running it looks so like a rat that my dogs gave chase to a wounded one, evidently thinking they were after a mammal. On the 16th of August, 1866, I found the nest in the garden, in a rose-bush, with four pale blue eggs in it, like those of *Acridotheres tristis.* The nest is a large structure firmly built of dry twigs, bark, sticks, ferns, and roots; diameter 3·75 × 3, depth inside 2·75, height outside nearly 5, exterior circumference about 18. Eggs, A 1 × ·75, B 1·0312 × ·75, C 1 × ·6875, D 1·0312 × ·75. Another nest, with three eggs only, was found in a thick clump of everlasting peas close to the ground on the 6th of September. The female sat very close, and this may possibly have been the second nest of the same pair that built the nest mentioned above, as it was built not far from the first.

427. ACTINODURA EGERTONI. Rufous Bar-wing.
Darjeeling collection, 1862. Two specimens.

428. ACTINODURA NEPALENSIS. Hoary Bar-wing.
Darjeeling collection, 1862. Two specimens.

429. SIBIA CAPISTRATA. Black-headed Sibia.
Darjeeling collection, 1862. Five specimens.
I procured several specimens at Simla. Dimensions:—

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Spread foot.	Extent.
A	9·25	4	4·5	1·1875	·75	..	..	11·51
B	9·125	4·125	4·5	1·1875	·75	·9375	1·1875	11

Irides reddish-brown; legs fleshy-brown in some, dirty purple-red in others, claws darker; bill black. Dr. Jerdon, in his description (B. Ind. vol. ii. pp. 54, 55), has omitted all mention of the wing: there is a white spot or bar across the bases of the primaries and secondaries; the scapulars are reddish-brown, with a tinge of ashy along the edges of their outer webs; the outer webs of the first four primaries are also edged with ashy, and the ends of all the quills the same; the outer webs of the rest shiny black. In the specimen before me the basal halves of only the two middle tail-feathers are rufous, the rest are all black, tipped with dark ashy. Head black and crested; and below the black or, rather, dark brown ear-coverts is a small and short white cheek-stripe. At Fagoo I was one day watching a large flock of *Lophophanes melanolophus* busily feeding in a high pine, when suddenly a *Sibia* darted out at the nearest and viciously drove it off. I fired and killed both birds. The species frequents thick trees, skulking a good deal amongst the foliage, and, although not shy, is a difficult bird to get at. One frequently has to fire where the leaves move, in the hopes of getting a specimen previously invisible. I have frequently seen them in the lofty silver-firs (*Pinus excelsa*). I got a young bird of the year fully fledged on September 29. It is like the adult, but has fleshy-white legs; the black crest is undeveloped, and the colour generally duller.

432. MALACOCERCUS TERRICOLOR. Bengal Babbler.

Very common in the neighbourhood of Barrackpore. Common also in Maunbhoom, where it breeds, making a neat nest of sticks, somewhat like that of *Turdus merula*, and laying four or five dark greenish-blue eggs. It is the "Pollycherra" of the natives in Maunbhoom. Abundant about Umballah.

436. MALACOCERCUS MALCOLMI. Large Grey Babbler.

First procured in the neighbourhood of Umballah, October 1866, where it is not uncommon.

438. CHATORHEA CAUDATA. The Striated Bush-Babbler.

Abundant about Umballah. I give the dimensions of a specimen killed on 26th October, 1866. Length 9; wing 3·0625; tail 4·5; tarsus 1·0625; spread of foot underneath 1·5; bill from front ·5625, from gape ·875; extent 9·25. This agrees fairly with Dr. Jerdon's description.

444. Hypsipetes psaroides. Black Hill-Bulbul.

Darjeeling collection, 1862; three specimens procured in Little Rungeet Valley. Also common in the vicinity of Simla. Dimensions as follows:—

		Length.	Wing.	Tail.	Tarsus.	Bill.	Extent.
Adult ..	A ..	10·375	5	5	·75	·875	14
	B ..	10·75	5·125	4·75	·75	1	14·75
Young of the year.	C ..	9·625	4·5	3·875	·7	·875	12

The adult has the sole of the foot underneath dirty white, rough as in *Buceros* or *Palæornis*. The species is essentially arboreal in its habits, frequenting the tops of the highest trees in small parties of four or five. It apparently ranges at a higher elevation about Simla than at Darjeeling. The outer tail-feathers are peculiar, narrow at the base, and getting broader on their inner webs towards the tip. The bill is bright crimson-red, legs the same, but a little lighter in hue. The inner webs of the wing- and tail-feathers are blackish, the outer only being dark ashy-grey, a fact which Dr. Jerdon does not mention. A circle of black, too, surrounds the ear-coverts, which are dark ashy like the rest. The young of the year have the irides dark brown; the bill black, slightly red at gape; the legs light red, with dark claws, of a much lighter colour on the whole than in the adult; the wing is brown on the outer webs; throat, abdomen, and under tail-coverts whitish; crest black and slightly developed; the rest of the bird is dark ashy, lighter in hue than in the adult.

448. Hemixus flavala. Brown-eared Bulbul.

Darjeeling collection, 1862. Three specimens.

449. Alcurus striatus. Striated Green Bulbul.

Darjeeling collection, 1862. One specimen.

451. Criniger flaveolus. White-throated Bulbul.

Darjeeling collection, 1862. One specimen.

456. Rubigula flaviventris. Black-crested Yellow Bulbul.

Darjeeling collection, 1862. Observed also in Burmah, on the Salween River, 1865. Length 7·5; wing 3·125; extent 9·75; tail 3·25; tarsus ·5625; bill from front ·5. Agrees with

Dr Jerdon's description. Bill black; legs horn-colour, with lighter soles; irides yellowish-white.

458. Otocompsa leucogenys. White-cheeked Crested Bulbul.

Darjeeling collection, 1862. Two specimens.

About Simla this bird is extremely abundant, as also all along the road from Kalka upwards to Simla, a distance of fifty-six miles. It is not actually found in the station of Simla, as it does not frequent such a high elevation,—but may be seen in abundance a little lower, in the Government garden at Annandale. Dimensions:—

	Length.	Wing.	Tail.	Tarsus.	Bill.	Extent.
A	8	3·75	3·75	·8125	·625	10·5
B	8·25	3·625	3·625	·8125	·625	10·5

Dr. Scott writes to me lately that he has seen several specimens in the station at Umballah during the last hot weather. I never before had heard of its occurring in the plains.

460. Otocompsa jocosa. Red-whiskered Bulbul.

The crimson feathers (*quasi* "whiskers") grow on the loose skin just below the eye, and appear to be moveable at will. The under tail-coverts are crimson, nearly approaching scarlet, of a lighter shade than the former. It is tolerably common in the neighbourhood of Barrackpore. I observed very large flocks of this species when proceeding up the Salween River in August 1865. They were clinging to the stems of the high reeds along the banks, and, when disturbed, flew off, following each other in long lines. There must have been many thousands altogether. Dimensions of a specimen in the flesh from this locality, August 1865:—Length 7·125; wing 3; tarsus ·75; extent 9·25; tail 3; bill from front ·5625. This would make the Burmese race* considerably smaller than the Indian.

461. Pycnonotus pygæus. Common Bengal Bulbul.

Darjeeling collection, 1862. Common in the neighbourhood of Barrackpore, where it breeds, making a neat cup-shaped nest of small twigs, in which three pink spotted eggs are laid.

462. Pycnonotus hæmorrhous. Common Madras Bulbul.

This appears to replace the former in the jungles of Maunbhoom, and breeds there. The nest is similar to that of its congener; but the eggs appear to be darker in colour. They may be described as pink, with dull red spots and blotches thickly scattered, especially at the blunt end. The major and minor axes of two specimens were ·875 and ·625, ·9375 and ·625.

---

* [*Otocompsa monticola* (MacClelland). *Cf. supra*, p. 8.—Ed.]

PYCNONOTUS INTERMEDIUS, A. Hay; Jerdon, B. Ind. ii. p. 95.

Specimens of a Bulbul procured at Simla seem to agree best with Dr. Jerdon's description of this species or variety.

	Length.	Wing.	Tail.	Tarsus.	Bill.	Spread foot.	Extent.
A....	8·75	4	4	·875	·6875	1·5	12
B....	9·125	4	4	·875	·6875	1·5	12

All the tail-feathers, including the middle pair, are tipped with white; the black does not extend to the nape, although the latter is decidedly of a darker brown than the rest of the upper portion of the back; the tail-coverts are pure white; the ear-coverts shiny brown; below, the throat is dark brown, the abdomen is ashy-white, faintly streaked with light brown on the flanks, pure white near the vent; tail very dark brown, nearly black; wings much lighter brown. Under tail-coverts, of course, bright crimson.

Other Bulbuls procured by me in Burmah are *P. finlaysoni*, *P. nigropileus* (*vide* P. Z. S. 1866, p. 549), and *Brachypodius melanocephalus* (?).

463. PHYLLORNIS JERDONI. Jerdon's Green Bulbul.

This handsome bird is very abundant in Maunbhoom, where it is called "Hurrooa" by the natives. Its note is so much like that of *Dicrurus macrocercus* that I have frequently been deceived by the resemblance. It breeds in the district. A nest with two eggs was brought to me at Beerachalee on April 4th, 1865. It is built at the fork of a bough, and neatly suspended from it, like a hammock, by silky fibres, which are firmly fixed to the two sprigs of the fork, and also form part of the bottom and outside of the nest. The inside is lined with dried bents and hairs. The eggs are creamy-white, with a few light pinky-brown spots, rather elongated, measuring ·85 by ·62. Interior diameter of nest 2·25; depth 1·5. The cry of alarm of this species is like that of *Parus major*.

465. PHYLLORNIS AURIFRONS. Golden-crested Green Bulbul.

Occasionally seen in the Maunbhoom district, and I procured specimens in February. The female has the golden forehead, though perhaps less brightly coloured than in the male; and Dr. Jerdon is, I think, in error when he says it wants it altogether. This bird has a powerful and very pleasing song, not unlike that of the English Song-Thrush. I have seen caged specimens, called "Mocking Birds," which were brought from Dacca, and said to have been captured there. I met this species again in the valley of the Salween in Burmah in August 1865.

466. PHYLLORNIS HARDWICKII. Blue-winged Green Bulbul.

Darjeeling collection, 1862. Four specimens.

468. IORA TYPHIA. White-winged Green Bulbul.

This is one of the commonest birds about Barrackpore in June and July during the rains, when others have quite deserted that part of the country. It is also tolerably abundant in Maunbhoom, and in Moulmein common in trees of *Mesua ferrea* in gardens, which, Titmouse-like, it carefully beats for insects. (*Cf.* P. Z. S. 1866, p. 549.) It is the "Chota amlah" of the Bowries of Maunbhoom.

470. ORIOLUS KUNDOO. The Indian Oriole.

The first specimen I had ever seen of this bird I got at Kashurghur, Maunbhoom, March 1864. A pair brought in by shikaree to Simla, June 21, 1866, measure as follows:—

	Length.	Wing.	Tail.	Tarsus.	Bill.	Extent.
♂	9·25	5·375	3·375	·8125	1·1875	15·5
♀	9·75	5·5	3·5	·875	1·125	16

The female has all the colours duller than in the male, and the black of the latter replaced by greenish. The colour of the bill, too, appears to be of a slightly duller red, much duller (as far as my recollection goes) in both sexes of this species than in *O. melanocephalus*. This male has got a curious fleshy kind of cere extending over the top of the bill from nostril to nostril, which is wanting in the female. Legs greenish-plumbeous in both.

A young male agrees well with Dr. Jerdon's description of the young bird: the bill is black; legs plumbeous; the throat white; but the breast and abdomen conspicuously marked with longitudinal streaks of a dark brown or black colour on a yellowish-white ground. This specimen was procured near Simla on 6th August, so that it is evident they breed in the neighbourhood.

472. ORIOLUS MELANOCEPHALUS. Black-headed Oriole.

This is the "Golden Oriole" of most Europeans in India, and also the "Mango-Bird." It is decidedly one of our handsomest birds. Its usual call-note is a sharp whistle, *k-ē-ē-u k-ē-ē-u*, sometimes only *kōōku kōō-woo*, which can be imitated by the human voice. Its call of inquiry may be syllabled *kee-kooku*? *kee koo woo*? It has a peculiarly comical song, which might almost be denominated harsh and cracked, just as if a Parrot were trying to whistle in a very high key, mixed up with a chattering as of Starlings. It is common both at Barrackpore and in Maunbhoom; at least males are; but somehow one seldom or ever seems to come across a female, unless the sexes are of exactly the same colour.

A nest with three eggs, brought to me at Beerachalee in Maunbhoom on 5th April, 1865, is cup-shaped, interior diameter 3·5, depth inside 2. It is composed outside of woolly fibres, flax and bits of dried leaves, and inside of bents and small dried twigs,—the whole compact and neat. The eggs are of a light pink ground (almost flesh-colour) with a few scattered spots of brown-pink, darker and more numerous at the blunt end; they measure 1·125 × barely ·8. The Burmese race of this bird appears to be smaller than the Bengal one. The dimensions of a male in most perfect plumage shot at Moulmein, September 23rd, 1865, are as follows:—Length 8·3125; wing 5·125; tail 3·25; bill from front 1·0625; tarsus ·875. (*Cf.* P. Z. S. 1866, p. 550.)

474. ORIOLUS TRAILLI. Maroon Oriole.

Darjeeling collection, 1862. Two specimens.

475. COPSYCHUS SAULARIS. Magpie-Robin.

Plentiful in the neighbourhood of Barrackpore, but not very common in Maunbhoom.

476. CITTOCINCLA MACRURA. Shama.

At Maunbhoom, March 6th, 1865, I made my first acquaintance with this famous songster. I was out after bears and deer in some ground very jungly and full of ravines, near Pathurkutta, when I heard several in different directions singing against each other. They were very shy, and would not allow me to approach within shot; so I sat down patiently, and, keeping quiet, looked out for chances. Soon two, evidently males, had a tremendous squabble in a thick creeper-covered tree close by. The one that was defeated flew off, pursued a short distance by the victor, who then returned to his perch and poured forth the most delicious melody in the way of a bird's song that I have ever heard. His appearance during this song of triumph was worth seeing—seated on a spray with his tail cocked up and spread out like a fan; the attitude was perfect, until the report of my gun frightened him away. I fancy the display I witnessed was on account of the approaching pairing-season. They are said to breed in that district in April and May; and the natives yearly make a few rupees by the sale of young birds brought up from the nest, which, even in the nearest bazars, fetch from five to six rupees a piece. In Calcutta a good song-bird cannot, I understand, be procured for less than ten or twelve.

Dimensions of a specimen in the flesh:—Length 10·25; wing 3·75; tail barely 6. The middle tail-feathers and the next pair to them are devoid of any white, which is conspicuously displayed in the rest. Legs and claws pale fleshy.

The species appears much more common in Burmah, frequenting gardens about Moulmein; but I never heard a wild bird there sing so sweetly as the one mentioned above.

477. MYIOMELA LEUCURA. White-tailed Blue Chat.

Darjeeling collection, 1862. Two specimens.

480. THAMNOBIA CAMBAIENSIS. Brown-backed Indian Robin.

Observed about Umballah in the North-west Provinces. This bird (the "Suya" of the Bowries) is found in great abundance in the Maunbhoom district, but more especially so in the breeding-season; and I am inclined to think that many migrate thither in March for that purpose.

At the end of March and beginning of April the jungles swarm with them, and as many as fifty eggs of this species alone have been brought to me in one day. As observed by Mr. Theobald (J. A. S. B. xxiv. p. 532), it shows a great partiality for fragments of cast snake-skins in the construction of its nest*, which is in general a loose structure roughly made of grass, bents, and fibres, and lined with horse-hair. It lays from three to four eggs, of a dirty white colour, speckled with reddish-brown spots most thickly massed about the blunt end—in some, forming an ill-defined ring.

Umballah, October 27, 1866.—I have noticed that this species, which is so very abundant here a little later, and which breeds here in numbers in February and March, has almost entirely disappeared, and is conspicuous by its absence.

481. PRATINCOLA CAPRATA. White-winged Black Robin.

Moulmein, September 14th, 1865.—Secured a specimen on grass stalks in front of the Commissioner's cutcherry, apparently a young male after the first moult, in fine plumage. Length 5·5 barely; wing 2·75; tarsus ·75; tail 2; bill from front ·375; extent 7·25.

Kalka, April 1st, 1867. This species is tolerably abundant here now. Dimensions of a specimen as follows:—Length 5·25; wing 2·75; tail 1·875; bill from front ·75; extent 8. They are plentiful between this and Dhurrumpore (a bungalow on the road to Simla, fifteen miles distant), the males being in full song at this time of year. Irides dark brown; the black on the breast is succeeded by rufous, and then come the white underparts. There is also some rufous on the upper tail-coverts in this specimen. This is not mentioned by Dr. Jerdon. Is it the breeding-plumage? A bird procured at Umballah on 12th November, 1866, and supposed to be the female of this species, is very dark brown above, with rufous upper tail-coverts; below brown, tending to rufous on the breast and abdomen; lower tail-coverts whitish. This agrees fairly with Dr. Jerdon's description; but the measurements are nearer those of my Kalka bird. Length 5·3125; wing 2·625; tail 2; tarsus not quite ·875; spread of foot underneath 1·125; bill from front ·437; from gape ·6875; extent 8·25; bill and legs black.

---

* [*Aedon galactodes* has the same curious habit, which hitherto has not been accounted for. (*Cf. supra*, p. 80, and 'Ibis,' 1859, p. 309.)—ED.]

483. Pratincola indica. Indian Bush-Chat.

Seen about Barrackpore in November.

A specimen in the flesh procured at Umballah, October 22nd, 1866, measured as follows:—Length barely 5·5; wing nearly 2·875; tail 2·125; tarsus ·8125; bill from front ·375; from gape ·625; extent 8·75; in winter plumage. This exceeds Dr. Jerdon's measurements; but the specimens procured at Simla are so much smaller that I cannot help suspecting that they belong to a different race. Compared with specimens in Col. Tytler's museum, there appeared, however, to be no difference between the two. The Simla specimens measure as follows:—

	Length.	Wing.	Tail.	Tarsus.	Bill.	Extent.	Spread foot.
A ♀ ..	4·87	2·5	1·875	·75	·437	7·25	
B ..	4·75	2·375	1·75	·75	·437	7·25	1·0625

Bill, legs, and claws black.

The only place about Simla where I have yet found these birds is the hot and bush-covered steep and stony hillside above Annandale gardens. They seem to avoid the cultivation, except where there are bushes only here and there, and are never found in the forest.

485. Pratincola insignis. Large Bush-Chat?

A bird procured at Lallroo, near Umballah, on the 14th of November, 1866, agrees with Dr. Jerdon's description of this species in having a conspicuous white throat, upper tail-coverts, patch on tertials and at the base of the primaries. The tail-feathers are white, with black shafts, the outer ones for all but ·5, which is brown, with a fulvous tip, as also have all the others. The white decreases toward the middle pair, which are brown for 1·5. Supercilium white, patch at base of bill blackish; breast light fulvous; the upper parts ashy-grey, darker in the centre; wings and their coverts edged with fulvous where not white. Length 5·75; wing 3·0625; tail 2·25; tarsus 1·0625; spread of foot underneath 1·3125; bill from front ·5, from gape ·75; extent 9·25.

486. PRATINCOLA FERREA. Dark-grey Bush-Chat.

Darjeeling collection, 1862. Two specimens.

I found this species very abundant about Simla in 1866, and collected a large series.

	Length.	Wing.	Tail.	Tarsus.	Bill.	Extent.
4th May. Adult ♂ ..	5·3125	2·3125	2·378	·4375	·4375	7·75
7th May. „ ♀ ..	5·75	2·3125	2·378	·87	·45	7·75
11th June. „ ♂ ..	5·3125	2·75	2·5	·8135	·4375	7·75
22nd July. ♂ of the year..	5·875	2·625	2·5	·8135	·4375	8·25
15th September. ♀ of the year? ..	5·75	2·75	2·5	·8135	..	8

The male killed on 4th May has the irides dark brown. A long supercilium, extending from the base of the bill to nape, white; head and ear-coverts, from base of bill, black; back mixed black and ashy; a white band on scapulars; wings brown; tail the same, except outer webs of exterior tail-feathers, which are white; throat and whole underparts shiny white; bill and legs black; upper tail-coverts ashy. It was shot off the top of a small fruit-tree in the garden, where it was singing sweetly.

The adult female has the bill, legs, and claws as in the male. Head and back, including the upper wing-coverts, dark brown, the feathers darker in the centre; ear-coverts dark brown, a slightly white supercilium, which, however, is short; throat and breast white, mixed with slight rusty on abdomen and under tail-coverts; upper tail-coverts and outer webs of tail-feathers bright rufous; quills of wings and tail brown; the secondary wing-coverts slightly tipped with fulvous brown. It was shot off the nest, which was carefully concealed in a hole at the root of a tree not far from the house. It is a neat cup, the outside and bottom composed of dry moss, lined inside with horsehair and straws of grass; depth outside 2·5, inside 1·75; diameter inside 2·5; outside 4·25. Number of eggs, four. Colour, light or pale greenish-blue, with a ring of rusty brown near the blunt end, and a few reddish-brown spots (lightly and indistinctly marked) all about this ring. Of four eggs, three measured ·75 by ·5625, the fourth ·6875 by ·5625.

The young male of the year has the upper parts mixed rufous and dusky, darker on the head; the upper tail-coverts unsullied rufous or dark cinnamon-colour; the wing dark brownish-slaty, nearly black, with ashy edges to tertials; tail black, tipped with rufous, and with ashy edges to exterior webs of quills; throat dirty white; a few brown specks on breast; lower parts fulvous white; bill and legs black.

Supposed female of the year:—Head and back dark brown; upper tail-coverts and outer webs of tail-feathers dark rufous; wings and tail dark brown; secondaries and tertials, and their coverts, edged with rufous on their outer webs; irides dark brown; eye *Ruticilla*-like, very circular and brilliant; throat creamy-white, tending to light brown on the breast and lower parts, somewhat darker on the flanks, and lighter about the vent; bill and legs black, a whitish spot at shoulder.

This species frequents woods, gardens, and places where trees are abundant. It is worthy of observation that one scarcely, if ever, sees the female, although males are common enough. The one I shot off the nest was (with the exception of the specimen last described) the only one I saw or secured.

487. OREICOLA JERDONI, Blyth, Ibis, 1867, p. 14; *Rhodophila melanoleuca*, Jerdon. Black-and-white Bush-Chat.

Mr. Blyth has given, in the passage cited, his reasons for altering the name of this species. It was first discovered by Dr. Jerdon at Caragola Ghaut, on the Ganges; and I happened to be with him when he secured his first specimen.

488. SAXICOLA LEUCUROIDES. Indian White-tailed Stone-Chat.

Umballah, November 12, 1866.—I obtained a fine male, on the same ground (in cantonments near the race-course) that had previously yielded me the next species (*S. picata*) and *S. deserti*, a plain covered with low straggling trees of the "keekur" or "babool" (*Acacia*, sp.). This was my first introduction to this fine species.

The following are the dimensions of three males:—

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Spread foot.	Extent.
Nov. 12...	6·75	3·625	2·75	1	·5	·75	1·375	11·375
Nov. 19...	6·5	3·625	2·75	1	·5	·75	1·25	11
Dec.	6·625	3·625	2·625	1	..	..	1·375	11·125

The last specimen was procured at Morar, near Gwalior.

I did not meet with the female. In his description of the plumage of the male, Dr. Jerdon does not mention the grey edgings to the winglet and primary wing-coverts (which edgings are also seen, somewhat more rufous, on the tips of the secondaries and tertials), nor that the under wing-coverts are pure black like the rest of the breast. "Sooty black" is inappropriate, the fresh-killed bird being pure black. The middle pair of tail-feathers have the black 1·5 inch in extent, the outer ·625, the rest of the tail being pure white. Bill and legs black; irides dark brown.

489. Saxicola picata. Pied Stone-Chat.

I obtained a male at Umballah, October 23rd, 1866, near the race-course, and on the next day a female in the same place. Dimensions:—

	Length.	Wing.	Tail.	Tarsus.	Spread foot.	Bill.	Gape.	Extent.
♂	6·625	3·625	2·63	·9375	1·1875	·5625	·87	11·25
♀	6·25	3·25	2·375	·75	1·125	·5	·75	9·875

Irides dark brown; bill and legs black; under tail-coverts pale cinnamon. The general colour of the female (undescribed by Dr. Jerdon) is greyish-brown, with a faint tinge of fulvous on the breast and wing-coverts; abdomen and under tail-coverts white, the upper tail-coverts and parts of tail being of a purer white, as in the male; irides and bill and legs the same as in the male. This species, like the rest of the genus, is a cold-weather visitant, apparently but lately arrived (October) and not at all common.

490. Saxicola capistrata, Gould, B. As. pt. xvii.; *S. leucomela*, Jerdon (*nec* Pallas). Grey-headed Stone-Chat.

I procured some specimens at Umballah in November 1866.

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Spread foot.	Extent.
Nov. 13. ♂	6·5625	3·5625	2·625	1	·437	·75	1·125	10·75
„ 14. ♂	6·375	3·625	2·3125	1·0625	·5	·8125	1·1875	11·25
„ 14. ♀	6·3125	3·5	2·625	1	·5	·8125	1·3125	10·75

The second male has some black on the forehead mixed with the grey: both it and the female were shot at Lallroo, eight miles north-west of Umballah, and were the only two of this species seen that day, although *S. œnanthe* and *S. deserti* were not uncommon. The female of this species approximates in colouring to that of *S. picata,* and may be thus described. General colour above dark ashy-grey, darker on wings and tail, with slightly rufous edgings to scapulars and tertials. The tail as in the male—that is, with dark ends to the middle pair of feathers for 1·625, and on the rest for about ·75. As in the male, the rump and upper tail-coverts are pure white, the throat, neck, and breast are grey, lighter than the back, and with a tinge of fulvous on ear-coverts, chin, and lower breast. Abdomen white ; under tail-coverts, as in the male, slightly fulvous. Irides dark brown in both sexes. Bill and legs black. According to Mr. Gould, this bird differs from *Motacilla leucomela* of Pallas, the head of which is almost pure white instead of grey, and which wants the buff colouring on the under tail-coverts (*Cf. suprà,* p. 15).

491. SAXICOLA ŒNANTHE. Wheatear.

All the specimens of this species procured in the cold weather of 1866, both at Umballah and at Morar (Gwalior), were in the dull-coloured winter plumage.

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Spread foot.	Extent.
Oct. 24.*	6·5	3·75	2·375	1·1875	·625	·9375	1·125	11
Nov. 10.*	6·625	3·75	2·125	1·1875	·625	·95	1·375	11·75
Dec. †	6·875	3·75	2·125	1·125	..	..	1·375	11·75

This last specimen has the bill deformed, both mandibles being unusually elongated and crossed near their tips. A common species, both at Umballah and Morar, in the cold weather only.

* Umballah specimens.

† Morar specimen.

492. Saxicola deserti. Black-throated Wheatear.

This is perhaps the most abundant Wheatear about Umballah, and I secured a large series of specimens of the male. The females, however, of this as well as other species of *Saxicola* seemed uncommonly scarce. Of this I only got two—one at Umballah, the other at Morar.

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Spread foot.	Extent.
Nov. 8.* ♂	7	3·7	2·75	1·0625	·5625	·87	1·375	11·45
Nov. 10.* Male in partially changing plumage, with white edgings to black throat,	6·5	3·75	2·625	1	·5625	·8125	1·0625	10·75
Nov. 10. ♀*	6·25	3·63	2·5	1	·5	·8125	1·1875	10·95
Dec. ♂†	6·5	3·75	2·5	1	..	..	1·25	11·5
„ ♀†	6·375	3·625	2·5	1	..	..	1·25	11

The female is much like *S. œnanthe* in winter plumage, but is of course smaller. The species, when disturbed, frequently sits on low acacia bushes; and one I had followed up took refuge in a peepul tree, on the lower bough of which I shot it. The female differs from *S. œnanthe* in having the rump and upper tail-coverts more fulvous, the throat and sides of the neck more ashy, and wants the white tip to the tail (which is peculiar to the latter) both above and below. It is also considerably smaller, and weighs less. The males of *S. deserti* found at Morar seemed to me to have a larger and whiter supercilium than Umballah specimens, and to want the white edgings to the black feathers of the throat. Mr. Gould figures this species as *Saxicola atrogularis*, Blyth (*vide suprà*, p. 15); but my specimens when freshly killed are more like Mr. Gould's previous figure of *S. montana* in colouring.

Nov. 14th, 1866. Dr. Scott and I went out to Lallroo this morning, a spot on the Simla road, eight miles north-west of Umballah, and came across and secured several *Saxicolæ*—six males and one female of *S. deserti*, a pair of *S. leucomela*, and one *S. œnanthe*. Of the latter I have hitherto seen only the plain-plumaged bird: of four specimens, only one turns out to be a male, and it does not apparently differ a bit from the rest in plumage. Both *S. œnanthe* and *S. deserti* have similar habits, frequenting the open plain, in which bushes occur here and there; on the tops of these *S. deserti* frequently perches. But *S. leucomela* is more a bird of the bushes or trees, flying into them when disturbed and alighting on a conspicuous bough. All three take readily to holes in the ground when wounded. The female of *S. deserti* entirely wants the jet-black of the male on the throat and under wing-coverts: the wings and tail are dark brown. It may be easily distinguished from the females of *S. picata* and *S. capistrata* by its more generally fulvous hue, instead of ashy-grey.

---

* Umballah specimens.

† Morar specimens.

497. Ruticilla rufiventris. Indian Redstart.

Exceedingly common in Maunbhoom in March, and at first I was inclined to think it bred there; but now I suspect that nests with eggs brought as belonging to it were those of *Thamnobia cambaiensis*. It is called "Tutturee Dama" by the natives of Maunbhoom.

504. Ruticilla cæruleocephala. Blue-headed Redstart.

Darjeeling collection, 1862. One specimen. Not previously observed at Darjeeling, according to Dr. Jerdon.

505. Ruticilla fuliginosa. Plumbeous Water-Robin.

Common about the hill-streams near Darjeeling, where I collected three specimens in 1862. The only pair I got at Simla were brought in by my shikaree on the 29th of July, 1866; and of these I have apparently omitted to record the dimensions.

506. Chimarrhornis leucocephala. White-capped Redstart.

I did not get this species at Simla, but observed it on the streams of the lower hill-ranges on the Simla cart-road between Kalka and Dhurrumpore. At Umballah, on the 12th of November, four specimens in the flesh were brought in by my shikaree, which he said he had procured in the neighbouring hills. I give the dimensions of two:—

	Length.	Wing.	Tail.	Tarsus.	Spread foot.	Bill.	Gape.	Extent.
A..	7·125	3·5	2·875	1·125	1·375	·5625	·8125	11
B..	7·25	3·5625	2·875	1·125	1·437	·45	·75	10·5

507. LARVIVORA CYANA. Blue Wood-Chat. Darjeeling collection, 1862.

One specimen only.

512. CALLIOPE KAMTSCHATKENSIS. Ruby-throat.

Found near Barrackpore, in thick thorny hedges, November 1864.

513. CALLIOPE PECTORALIS. White-tailed Ruby-throat.

Simla, September 23rd, 1866. A young male, with tail but partially developed, was caught in a trap alive below Colonel Gott's house in the station and brought to me alive, but died on the road. The following are the dimensions:— Length 5·75; wing 2·75; tail 1·875, tipped with white on all but the middle pair of feathers; tarsus 1·375; bill from front ·5625; extent 8·5. Bill and legs dark brown. I had not previously observed this bird here, and I only got one specimen.

514. CYANECULA SUECICA. Blue-throat.

Collected at Barrackpore, 1864. A specimen in the flesh measured, length 5·5, wing 2·75—considerably less than Dr. Jerdon's. Observed also about Umballah in sugar-canes in 1865, tolerably abundant. Again at Umballah, October 24, 1866, when I secured specimens. Length 6; wing 2·875; tail 2·25; tarsus 1·0625; spread of foot 1·25; bill from front nearly ·5, from gape nearly ·75; extent 8·625.

516. ACROCEPHALUS DUMETORUM. Lesser Reed-Warbler?

Two specimens procured at Barrackpore, November 22, 1864, are perhaps referable to this species. Length 5·5; legs greenish, the rest as in Dr. Jerdon's description of that species. It haunts hedgerows and thick clumps of bamboos, and utters the sharp "*titick*" described by Hutton (Cat., Nos. 497, 498, of 1864).

518. ARUNDINAX OLIVACEUS. Thick-billed Reed-Warbler?

Colonel Tytler has referred some small Warblers procured by me at Umballah, in October 1866, to this species; but my dimensions do not agree at all with Dr. Jerdon's. I append a description:—Olive-brown above, and dusky-white beneath, most pure on the throat and abdomen, and inclining to fulvous on breast and under tail-coverts. Irides greyish-brown.

	Length.	Wing.	Tail.	Tarsus.	Bill.	Gape.	Extent.
A ..	5·375	2·375	2·25	·8125	·375	·5625	7·5
B ..	5·375	2·5	2·15	·75	·375	·5625	7·5
C ..	5·5	2·625	2·125	·85	·375	·5625	7·625

530. ORTHOTOMUS LONGICAUDA. Indian Tailor-Bird.

Darjeeling collection, 1862. Barrackpore (common), Maunbhoom (rare), and Salween River, Burmah, where I secured some specimens in August 1865, which seem smaller than the Indian race. Specimen in flesh:—Length 4·875; wing 1·75; tail 1·875; tarsus ·625; bill from front ·5; extent 5. Irides brownish yellow.

536. PRINIA GRACILIS. Franklin's Wren-Warbler.

This elegant little bird is common in Maunbhoom, and goes about in parties of seven or eight, sometimes more, frequenting the low and thick bushes of *Zizyphus jujuba*. In watching a flock of them, some are seen diligently searching every twig and leaf, others on bare twigs near the ground prying intently among the leaves, another, mayhap, on a fallen leaf, with his tail cocked up, and whole attitude one of the greatest consequence. Another on the top of the bush is preening himself, twisting his body and stretching his wings; and the last, on the point of flying off to a neighbouring bush covered with scarlet flowers, gives a preparatory circular sweep with his tail, and is off, soon to be followed by all the rest.

The male has a very sweet but short song. The peculiar silky texture of the feathers of the breast is remarkable. They are sometimes, but not often, seen in low trees. The whole flock, when they see anything unusual, will commence their chirping call of *tee-tee-tee*, whence the native name "Teep-teepee." Specimen in flesh:—Length 4·625; wing 1·75; tail 2. Claws brown.

PRINIA BEAVANI, Walden, P. Z. S. 1866, p. 551.

I shot my specimens of this new species at Schouay Goon, on the Salween River, on the 10th of August 1865. The dimensions of a fresh specimen are as follows:—Length 4·125; wing 1·625; tail 1·625; tarsus ·75; bill from front scarcely ·5; extent 5.

543. Drymoipus inornatus. Common Wren-Warbler.

Umballah, October 24. Length 4·75; wing 1·875; tail 1·875; tarsus ·8125; spread of foot underneath ·9375; bill from front ·4375, from gape ·625; extent 6. Irides greyish-brown. This specimen, shot in low grass, is referred to this species by Colonel Tytler, without comparison, however, with his own specimens.

549. Suya atrogularis. Black-breasted Wren-Warbler.

Darjeeling collection, 1862. Two specimens.

551. Franklinia buchanani. Rufous-fronted Wren-Warbler.

Irides reddish-orange; bill horny, with lower mandible lighter; legs fleshy. Top of head chestnut or ferruginous brown (much as in *Orthotomus longicauda*), the upper parts generally the same hue but duller; wings brown, with brighter edges; tail dark brown, the middle tail-feathers obsoletely barred and very slightly tipped with white; this white tip increases in extent on the other tail-feathers, and reaches on the outermost ·437 on the inner web, and on the outer web 1·125. The white edging to the tail is a most characteristic feature in the bird, which, when flying, conspicuously displays its fan-shaped tail with its white border. The lower parts are pure white, except the thighs and lower tail-coverts, which are fulvous. The under wing-coverts are fulvous-white.

	Length.	Wing.	Tail.	Tarsus.	Spread foot.	Bill.	Gape.	Extent
A ♀..	5·75	2·0625	2·8125	·6875	·9375	·375	·6	6·5
B ♀..	5·5	1.9375	2·5	·6875	·9375	·375	·6	6

The species has much the habits of a *Chatorhea*, and agrees in most other respects with Dr. Jerdon's description. They were found frequenting low and thick bushes of "byre" (*Zizyphus jujuba*) along the edges of a dry nullah at Lallroo, near Umballah, on the 14th of November, 1866. Uncommonly restless, and difficult to procure, although they frequently come out of the bush they may be in, alight on the ground when the collector is on the further side of the bush, and then return sharply into cover when they see him.

[To be continued.]

XXVII.—*Letters, Announcements, &c.*

The following letters, addressed "To the Editor of 'The Ibis,'" have been received:—

Sir,—Allow me to confirm the statement respecting the bower-building habits of the Regent-bird (*Sericulus melinus*). Several years ago (September 23, 1861) I found what I thought was the bower of the Satin-bird (*Ptilonorhynchus holosericeus*); but it was a very small one, and in my diary I mentioned that "the only birds seen near it were two or three Regent-birds." I thought no more of the matter until I saw some remarks on the subject by Mr. Coxen, of Brisbane [*Cf.* Gould, Handb. B. Austral. i. pp. 458–461]. During my visit to the Richmond River I determined to pay close attention to the fact, and was not long before I had an opportunity of making some observations. On the 2nd October, 1866, when returning to our camp, some twenty miles from the township, I stopped to look for an *Atrichia*, which, three days before, I had heard calling at a certain log; and while standing, gun in hand, ready to fire as soon as the bird, which was at that moment in a remarkably mocking humour, should show itself, I was somewhat surprised at seeing a male Regent-bird fly down and sit within a yard of me. Between the two I hardly knew which choice to take—the *Atrichia*, which was singing close in front of me, or the chance of finding the long-wished-for bower. I decided on the former, and remained motionless for full five minutes, while the Regent-bird hopped round me, and finally on to the ground at my feet, when, looking down, I saw the bower scarcely a yard from where I was standing: had I stepped down off the log I must have crushed it. The bird, after hopping about it, and rearranging some of the shells (*Helices*) and berries, with which its centre was filled, took its departure, much to my relief, for I was beginning to feel uncomfortable with standing so long in the same position. Further research was not very successful; we met with only one other bower. Wishing to obtain a living specimen of so beautiful a bird as the old male of this species, I determined to leave the structure until the last thing on my final return to Lismore, which was on the 3rd of November following. We then stopped on our way, and, setting eight snares round the bower, anxiously awaited the result. It was not long before we heard the harsh scolding cry of the old bird, and knew that he had "put his foot in it." Having taken him out and transferred him to a temporary cage, we carefully pushed a board, brought for the purpose, underneath the bower and removed it without injury. It is now before me, and is placed upon and supported by a platform of sticks, which, crossing each other in various directions, form a solid foundation, into which the upright twigs are stuck. This platform is about 14 inches long by 10 broad, the upright twigs are some 10 or 12 inches high, and the entrances 4 inches wide. The middle measures 4 inches across, and is filled with land shells of five or six species, and several kinds of berries of various colours, blue, red, and black, which gave it, when fresh, a very pretty appearance. Besides these there were several newly-picked leaves and young shoots of a pinkish tint, the whole showing a decided "taste for the beautiful" on the part of this species. I remain, &c.

Edward P. Ramsay.

Dobroyde,
March 12, 1867.

South African Museum, Capetown,
June 17th, 1867.

Sir,—The recent acquisition of some, to me, new and rare eggs, belonging to birds which breed on some of the islands in the inhospitable Antarctic regions, induces me to forward you a few notes on them and on the habits of some of the birds of those regions.

The eggs, together with a collection of skins of several species of birds, and a fine skin of the male Sea-elephant (*Macrorhinus proboscidius*) were brought from the Crozette Islands by Captain Armson, who commands a vessel plying between this port and the islands, bringing up oil obtained from the Sea-elephants caught at the stations on that group. Captain Armson is becoming more and more enthusiastic in his researches as he experiences the pleasures of the study; and I need scarcely say his observations increase in value. Many of them I have had confirmed by the sailors of the vessels trading thither, who generally pay me a visit at this museum during their "liberty run" on shore.

Diomedea fuliginosa. Capt. Armson brought a single specimen of this bird's egg. It measures 4″ 2‴ by 2″ 6‴, and resembles, generally, that of the larger *D. exulans*, being chalky white, coarse to the touch, and of a *square* truncated form. It is also minutely pitted in an indistinct band at the obtuse end with reddish dots. This species is called "Blue bird" by the sealers, who readily distinguish it from the equally sooty Giant Petrel by the white eyelids and white mark along the bill. They say it lays only a single egg, which is very good eating.

Procellaria gigantea. The egg measures 4″ 3‴ by 2″ 8‴, and is of a dirty white and very rough, reminding one of that of a *Crax*. In shape it is like that of a common Goose, and is rather pointed at each end. It retains the strong musky odour of the parent, which is called "Glutton-bird" by the dealers, who state that they cannot eat the egg on account of its smell. There is only one egg laid in each nest. These birds are said to be so fearless that they congregate on the carcasses of the seals which are being cut up, and rival the men in the flensing process.

Chionis minor *. This elegant bird, the "Snow-drop" and "Snow-flake" of the Sealers, seems to abound in the Crozette Islands. Capt. Armson has succeeded in bringing several specimens alive to the Cape. A single egg obtained by him was unfortunately attacked by mice on board; but enough remains to show its contour and colour. The instant I saw it I was reminded of the eggs of *Hæmatopus*; and on placing it in the collection along with these, the very sailors about me were struck with the resemblance. It measures 2″ 10‴ by 1″ 10‴, and is of an olive-brown, unequally spotted with dark and light purple or deep brown. It is difficult to describe these light purple blotches—they appear as if they were dark-brown spots seen through a semitransparent medium or film. In shape it is quite that of the *Charadriidæ*. Both birds and eggs are esteemed good food by the sealers.

---

* [Mr. Layard by mistake wrote *C. alba*; but the specimen he sent to the British Museum proves that these notes refer to the smaller species, as we are kindly informed by Mr. G. R. Gray.—Ed.]

Sterna meridionalis. Skins and eggs of a Tern which I can only identify with this species. The latter measure 1″ 11‴ by 1″ 3‴, and are of a deep olive-green, with black and brown spots generally distributed but forming a zone near the obtuse end.

Procellaria æquinoctialis. The "Black Haglet" of the sealers. It lays but one egg, which measures 3″ 2‴ by 2″ 2‴, and is of a smooth, but not glistening, chalky white.

Thalassidroma melanogaster. The eggs are 1″ 6‴ by 1″ 3‴, in colour like those of the last, but their texture finer, as befits a smaller egg; their shape rounded. The birds brought flew on board. In a similar manner a specimen of *T. leucogaster* was captured, during a gale of wind, by Lieut.-Commander L. A. Beardslee, U.S. Navy, in the 'Aroostook,' 300 miles to the south-west, and presented to this Museum.

Lestris catarrhactes (*L. antarctica*, Less.). I saw this species in Table Bay, for the first time, about two years since, and directed Capt. Armson to keep a good look-out for it. This he has done with success. It lays two eggs, which measure 3″ by 2″ 1‴, and are of a pale brown-green (like that of *L. parasitica* in our Museum), spotted, chiefly at the obtuse end, with large indistinct pale purple and brown blotches. The bird is known to the sealers as " Sea-hen," and, with its eggs, is much eaten by them.

A Gull's egg, which, so far as I can judge, in no way differs from those of *Larus dominicanus* of the Cape. Capt. Armson has not brought the skin of this species, which he, on closely observing *L. dominicanus* in the Museum, believes to be different, though some of my sailor-friends avow it is the same. Can it be *L. pacificus*, Gould?

Aptenodytes patagonicus. One bird lived till near the Cape, and then died for want of proper food. The eggs are of a dirty, pale greenish-white, covered with a thin calcareous film, which in most cases the sealers have carefully cleared off. They measure 4″ 3‴ by 3″, and in shape are very peculiar, tapering to the acute end very abruptly from the greatest diameter, about five-sixths of their length. A longitudinal section would not be unlike the shape of a boy's kite. The sealers say the birds carry their single egg about with them, concealed between their feet and the plumage of the belly, waddling along on their "shins" (the tibiæ). The "Rock-hoppers" (which I identify with the Falkland-Island *A. nigrivestis*) and "Jackasses" (*A. chrysocome*), are said to lay three eggs; but I somewhat doubt this, for I know that *Spheniscus demersus* lays but one. The young of *A. patagonicus*, brought by Capt. Armson, are the queerest-looking creatures for birds I ever saw. They are far more like young brown bears! The sailors' name expresses their appearance exactly; they call them "Oakum-boys"; and they are just balls of brown oakum!

Graculus carunculatus (Gmel.)? The "King-Duiker" of sealers. Eggs and skins which I refer to this species, from Prof. Schlegel's short description of it (Mus. des Pays-Bas, *Pelecani*, p. 21), have been brought. The former measure 2″ 10‴ by 1″ 11‴, and are of a pale green covered with the usual chalky matter, rather sharply pointed at each end, and have the shell very thick.

Diomedea exulans. Several fine eggs of this species show a marked similarity in form and colour to that of *D. fuliginosa*, as already noticed. They measure 5″ by 3″ 3‴. Capt. Armson has also brought nestlings of several ages, and a young bird, said to be about five or six days old, which is covered with pure white silky down; but the bill is the most remarkable feature, the tips of the mandibles being armed for about three quarters of an inch with obtuse tumid sheaths, as hard, white, and shining as china.

Several other birds breed on these islands, of which I hope to get eggs during the next season: now all is covered with ice and snow. Capt. Armson has brought skins of *Procellaria macroptera*, *Prion banksi* (both with their young), *Puffinura urinatrix*, and a small Teal which I cannot identify. Land-birds, he says, there are none; and the only insects I can hear of are some flies and spiders. The young of the Petrels are mere "squabs," covered with dark grey or black down, but each species is readily distinguishable by its bill.

My son writes me word that he has observed a curious habit of the Drongo-Shrike, *Dicrurus musicus*. He says, "I have been puzzled to know why the Drongos persecute the Wagtails (*Motacilla capensis*). On watching one closely, I saw him dart from his post of observation at a Wagtail that had just caught a fly, and, after dodging him at every turn, made him give up the fly, which he carried off and devoured." This is very *Lestris*-like, and a habit I never observed in the Ceylon Drongos.

June 19th. I have just been up to see the last living *Chionis*. He is most *Hæmatopus*-like in his motions, moving with great swiftness and feeding on meat, which he holds down between his feet and tears into shreds. He is very fearless, and attacked the cats which came near him. The legs are livid brown; bill black, with a pink cere round the eye, the iris of which is black or dark horn-colour.

Some of the sealers, very intelligent men, told me this morning, in reply to my questions, that the Albatroses feed their young, all the time they are in the nest, with squids. The young birds remain in the nest till driven away by the old ones when they want the nest again. They are usually in the nest ten months, growing very slowly, but are very fat, and not at all fishy. The men laughed at the idea of their subsisting without food, as suggested in a previous notice in 'The Ibis' (1866, p. 324).

Yours very faithfully,
E. L. Layard.

Geological Survey Office, Calcutta,
July 17th, 1867.

Sir,—I think that all who have paid attention to the ornithology of India will be interested in hearing of the re-discovery of Franklin's long-lost *Certhia spilonota* (*Salpornis spilonota*, Gray; Jerdon, B. Ind. i. p. 382). I have collected birds during the past year around Nagpoor, and in the country to the south, about Chanda and Sirouchar; and amongst other rarities I had the good fortune to obtain eight or nine specimens of *Salpornis*, most of them in good condition. They agree perfectly with the somewhat meagre original description given by Major Franklin (P. Z. S. 1831, p. 121), and with Mr. Blyth's fuller account in 'The Ibis' for 1865 (p. 48). My first specimen was killed about twenty miles south of Chanda; but the birds there appeared to be very rare. It was much less so, though still very far indeed from common, in the great forests upon the Pranhita and Godavery rivers about Siroucha. This is five hundred miles south of Franklin's supposed original locality, and still further from Behar, whence Mr. Hodgson is said to have obtained specimens. It is very probable that the neighbourhood of the Godavery is the principal locality for this bird, and that the specimens obtained to the northward were stragglers. It is curious that Dr. Jerdon did not meet with it in Bustar, which is not very far from Siroucha and is a portion of the same great forest tract, which, indeed, stretches from the Godavery to Midnapoor, and is the largest extent of "jungle" in India.

Salpornis is not very wary. It has much the appearance of a *Sitta,* clinging to the largest trees, running round and round their trunks in all directions, and searching for insects. I found *Coleoptera* in their stomachs. In April the sexes were paired, and the birds evidently breeding; but I had not the good fortune to obtain the eggs.

I once saw, I believe, *Rhinoptilus bitorquatus,* Jerdon (B. Ind. ii. p. 628), but failed to obtain a specimen. The birds, three in number, were in open forests near Siroucha; and similar country extended for many miles around. I was looking for bigger game (to wit, Gaur), and I had no missile smaller than a No. 14 bullet with me; but I rode on horseback close to the birds, and distinctly made out the gorget and broad white supercilium. In their carriage and general appearance, mode of running, and so forth, the birds were intermediate between Courier-Plovers and Lapwings.

I thrice saw colonies of *Hirundo fluvicola,* Jerdon; but it is a rare bird. Their nests were in every case massed together, as described by Dr. Jerdon (B. Ind. i. p. 162), beneath an overhanging bank, below which was deep water. My friend Mr. Fedden, who was with me in the same district, told me that he met with a colony beneath a waterfall on the Pem Gunga river, and the birds flew in and out of their nests through the water. In every case the nests were in places which would be covered by the river during the wet season. I was told by the natives that the birds keep about the same spot, and return again to their former nesting-place after the rains. This is highly probable; for one, at least, of the localities I hit upon was mentioned by Dr. Jerdon—that on the Wurdu river, west of Chanda. The birds appear never to go very far from their nests, and generally keep close to the river, beating for about half a mile or so up and down, not, however, keeping to the river-bed itself as *H. ruficeps*, Licht., does when breeding. I obtained the eggs, which are very similar in shape and colour to those of *H. ruficeps*, being white, sparingly spotted with claret-colour, or nearly pure white. I suspect the birds have two broods in the year—one in February, the other in April. I found many young birds in the nests at the beginning of March; while in the middle of April there were eggs in the nests, and the young of the first brood, differing very little from their parents, were flying about.

I also obtained the eggs of *Cotyle concolor* (Sykes), which have not, I think, been described. They are much more oval than those of *Hirundo*, white, thickly and minutely speckled with brown, and three in number. The nests were under rocky ledges on the banks of rivers; and I am not quite sure that they were not deserted nests of *Hirundo ruficeps*. I once found the eggs in what appeared to be a deserted nest of *H. fluvicola*.

My other most valuable captures were two specimens of *Cyornis tickelliæ*, Blyth (B. Ind. i. p. 467), one of them, a female, precisely similar in colouring to the male, and *Cotyle rupestris*, which, according to Dr. Jerdon (*tom. cit.* p. 166), is not known to have been previously shot in the plains of India. I found small companies of them around a rocky hill in February. I also obtained the following birds, which had not previously been found so far to the south:—

Circus cyaneus !; a fine specimen, killed at Chanda.
Pericrocotus erythropygius; several specimens, Nagpoor.
Muscicapula superciliaris; one specimen, Chanda.
Saxicola opistholeuca; one specimen, Nagpoor.
S. atrogularis; three specimens, Nagpoor.
Emberiza huttoni; four specimens, two at Nagpoor, and two west of Chanda.

While the following, also amongst my collections, have not hitherto been met with so far to the north or to the east:—

Leucocerca leucogaster (Cuv.) (*L. pectoralis*, Jerdon), Chanda.
Iora zeylanica, } Chanda.
Prinia socialis, }
Spizalauda deva, west of Chanda.
Perdicula erythrorhyncha, near Siroucha.

I have still a few species which I have been, as yet, unable to determine—amongst them a *Saxicola,* apparently new to India, and a *Muscicapula* (?); but I have had but little time for comparing them since I returned to Calcutta.

I see that Mr. Wallace, in 'The Ibis' for 1864 (p. 103), says that he never found ants in the stomach of a *Pitta.* I shot three specimens of *P. bengalensis* one day in the beginning of May, and examined the contents of their stomachs. One had fed partly upon the large black ant, so common in the Indian jungles; the other two had fed entirely upon "white ants." I have not seen *Termites* mentioned before as forming part of the food of these birds. I also found black ants along with *Coleoptera* in the stomach of a solitary specimen, *Oreocœtes cinclorhynchus,* which I shot in the Chanda forest.

W. T. Blanford.

Sir,—I beg leave to trouble you with a few remarks relating to three very interesting papers in the last number of 'The Ibis,' those by Professor Baird, Captain Beavan, and Mr. E. Newton.

Amongst the birds supposed to be identical in Europe and North America, Prof. Baird includes *Aquila chrysaetus, Pandion haliæetus, Brachyotus vulgaris, Nyctea nivea*, and *Surnia ulula.* I have had the opportunity of examining American and European examples of all these species, and feel convinced of their being specifically identical on the North-American and European continents.

The Norwich Museum possesses an extensive series of Ospreys from various parts of the world; and I have no hesitation in expressing my belief that the species is identical, not only on the coasts of North America and of Europe, but also on those of Africa, Asia, and Australia.

It appears to me, however, that Ospreys from the Atlantic coast of North America are, on the average, of somewhat larger size than those from the Pacific coasts. I may add that *Syrnium cinereum,* though not included in the list above referred to, is certainly identical on the two continents of Europe and North America.

Professor Baird includes in the same list *Archibuteo lagopus,* with reference to which I wish to observe that I have examined a large number of species of Rough-legged Buzzards, obtained both in Europe and in North America, and I have also kept alive for several years specimens obtained in Labrador, as well as English examples, and the conclusion at which I have arrived is, that the true *A. lagopus* does not occur in America, and that the American birds which most resemble the European species are, in fact, only the paler examples of *A. sancti-johannis.*

I have for many years made a point of examining, as carefully as I have been able, as many specimens as possible of the Peregrine Falcon from all parts of both hemispheres where that widely-spread species occurs, and I have found myself entirely unable to detect any constant specific difference that may be relied on between the three supposed species, *Falco peregrinus, F. anatum,* and *F. nigriceps.*

In this case, as in that of the Osprey, specimens from the Pacific coast (where this Falcon ranges from Vancouver's Island northward to Chili southward) appear to be of a slightly smaller average size than those found in the countries of North America lying towards the Atlantic Ocean; but I cannot think that there is sufficient variation in this respect to admit of specific separation.

South of Chili, in the southern part of Patagonia and about the Straits of Magellan a really distinct race does occur, closely allied to *F. melanogenys* of Australia, from which, indeed, it only differs in its slightly larger size. It is worthy of remark that the three southern races of Peregrine Falcons, viz. this Magellan race, to which, I believe, no specific name has yet been given, *F. melanogenys,* of Australia, and *F. minor,* of South Africa, all agree between themselves, and differ from the true *F. peregrinus* in having much narrower spaces than occur in that bird, between the dark transverse abdominal bars which characterize the adult plumage of all these Falcons.

Before leaving Prof. Baird's paper I wish to add a remark on the subject of *Falco islandicus.* I have never had an opportunity of examining an adult specimen of this Falcon from any locality westward of Greenland; but I have seen several immature birds from Labrador and from the Hudson's Bay Territory, and have invariably found them of a darker and more fuliginous hue than specimens of a corresponding age from Iceland and Greenland.

This peculiarity, which is well represented in Audubon's plate of the immature example procured by him in Labrador, is, I think, deserving further investigation by any naturalist who may have the opportunity of making it.

With reference to the avifauna of the Andaman Islands, I wish to mention that I have several times examined the two living examples of *Spilornis* sent from those islands to the Zoological Society, and I think I may say, confidently, that they do not belong (as suggested by Capt. Beavan) to *S. cheela*, but to the more southern species, *S. bacha* (Daudin), *S. bido* (Horsfield), which inhabits the islands of Ceylon, Sumatra, and Java, and the southern extremity of the Malay peninsula.

In regard to the birds of the Seychelles Islands, I think it may be worth mentioning that the Norwich Museum possesses an authentic Seychelles specimen of *Tinnunculus alaudarius*, which may possibly be the bird which was mentioned to Mr. Newton under the local name of "Papangue." I may add that this specimen (an adult male) is the only example I have seen of the species from any locality south of the equator.

J. H. Gurney.

8 August, 1867.

Sir,—The geographical distribution of the European races of the genus *Cinclus*, on which Mr. Salvin has thrown much light in his model-paper in your January number, is still very perplexing; nor is it simplified by the fact that I have recently ascertained that the Dipper, which breeds in the Pyrenees, is *C. melanogaster*! Mr. Salvin conjectured that the Pyrenean bird would prove to be *C. albicollis*; but this does not appear to be the case. My specimens, an adult and an immature one, were taken on the 27th of July last, near Eaux-Chaudes, and agree precisely with the identical Scandinavian examples examined by Mr. Salvin. I am, Sir, &c.,

H. B. Tristram.

Greatham, 20 August, 1867.

Sir,—In the last number of 'The Ibis' for this year (p. 295), I observe that Mr. Blyth has given a new title, *Loriculus edwardsi*, to the common little Parrakeet of Ceylon, hitherto known as *Psittacus indicus*, Gm., or as *P. asiaticus*, Lath. With due deference to Mr. Blyth's high authority on ornithological subjects (and no one more fully respects it than I do), I regret that I cannot concur in the reasons given by that gentleman for rejecting, in this case, the older titles and adding a new one to our already over-loaded list of synonyms.

Edwards first figured and described the Ceylon species (i. pl. 6), from a specimen in spirits "brought from some Dutch settlement in the East Indies." From his descriptions and plate, which Brisson notices as "une figure exacte," it is evident that the Ceylon bird and no other served as the subject. Brisson, describing from the plate, but without having seen the species (for the two asterisks at the commencement of his diagnosis are wanting), founded on it his *Psittacula indica*. He quotes no other authors. Linnæus (Syst. Nat. Ed. XII.) omitted all notice of Brisson's description, and, under *P. galgulus*, merely refers the reader to Edwards's plate ("*Conf. Edw. t.* 6") *P. galgulus* having been solely based by him on Edwards's plate 263, fig. 1. Latham (Syn. i. p. 311), under the title of "red and green Indian Parrot," inserts the species on the authority of Brisson and Edwards; while Gmelin (Syst. Nat. i. p. 349), quoting those three authors only, gave the species the title of *P. indicus*. Latham, a little later, 1790 (Ind. Orn. i. p. 130), while quoting Gmelin, Brisson, Edwards and himself, entitled it *P. asiaticus*. Both Gmelin and Latham therefore gave their names to Edwards's species, which was undoubtedly from Ceylon. Mr. Blyth seems fully to admit that Edwards's plate 6 refers to the Ceylon bird, and yet he says "this race is wholly peculiar to Ceylon, and therefore is neither the *Psittacus indicus* of Gmelin, nor *P. asiaticus* of Latham." Now as this form is not found in India proper, we may follow Messrs. Horsfield and Moore (Cat. E. Ind. Mus. ii. p. 628) and suppress Gmelin's title, otherwise the oldest; but what reason is there for not adopting the next in succession, *P. asiaticus*, Latham?

With reference to the same paper you will perhaps permit me to add that *Lanius lucionensis* is a Linnæan title originally given to a Philippine race which is totally distinct from that of Ceylon, as I have already endeavoured to show in your Journal (*antea*, pp. 212 *et seqq.*); that *Dicrurus edoliiformis*, Blyth, is *D. lophorhinus*, Vieill. (N. Dict. d'Hist. Nat. 752), founded on *le Drongup* of Levaillant (Ois. d'Afr. iv. pl. 173), the type of which is still preserved at Leyden, where it was shown me by my amiable and most learned friend Professor Schlegel; that *D. leucopygialis*, Blyth, is *Oriolus furcatus*, Gm. (Syst. Nat. i. p. 395), founded on Brisson's *Icterus cauda bifida* (Orn. ii. p. 105), which in its turn was founded on Seba's "*Turdus niger mexicanus*" (Locupl. Rerum Nat. Thes. i. p. 102, pl. 65. fig. 2), and referred by Wagler (Syst. Av. fol. 23. p. 12) to *D. cærulescens* (Linn.); and that *Temenuchus albofrontatus* (Layard), 1854, must give way to "*Pastor senex*, Temm. Mus. Lugd.", Bp. (Consp. i. p. 419). Examples in the *senex*-state of plumage, that is with the entire head grey, appear to be rare; for in a considerable series of Ceylon specimens of the species I have only met with one as described by Bonaparte. Its Bengal origin, as given in the 'Conspectus,' is of course erroneous.

I have, &c.,

Chislehurst, Kent, August 25, 1867. WALDEN.

SIR,—I was unfortunately absent from the meeting of the Zoological Society held on the 8th of May, 1866, when the first specimen of *Sylvia aquatica*, Lath., known to have been obtained in England was exhibited; but in November last, when on a visit to Mr. Borrer, I had an opportunity of examining it, and was at once struck with its similarity to a bird in my own collection which I had received from the neighbourhood of Loughborough, and which I had put aside to be named.

On my return home I reexamined this example, and then felt little doubt that it was a *S. aquatica*. To be sure, however, that I was not mistaken, I sent it for confirmation to Mr. Tristram, and that gentleman thereupon wrote to me as follows:—"There is no doubt about your *Salicaria aquatica*. It is not in full plumage, and therefore may be a bird of the year. The mature bird in breeding-plumage has not the spots on the breast and flanks. There is no difference between the sexes."

It only remains for me to add that my specimen was obtained near Loughborough, in Leicestershire, during the summer of 1864, and was forwarded to me by a friend, under the impression that it was a Grasshopper-Warbler. When we consider that *S. aquatica* is known to breed on the opposite shores of Holland, and is found in the marshes about Lille and Dieppe, we are only surprised that it is not a more frequent visitor to Great Britain than it appears to be. On the other hand its general resemblance in size and colour to other well-known species, when seen at a little distance, would naturally cause it to be overlooked. I am, &c.,

Kingsbury, Middlesex, August, 1867. J. Edmund Harting.

Yatesbury Rectory, Calne, Sept. 3, 1867.

Sir,—In the last number of 'The Ibis' (p. 374) you did me the honour of reviewing a paper which I read some time since at Salisbury, before our County Natural History Society.

I had no expectation or desire that my unpretending paper should occupy so distinguished a position as to receive notice from 'The Ibis;' but as it has been so honoured, I trust you will allow me in self-defence to assert that, if your reviewer had taken the trouble to read my paper before he criticised it, he would have discovered that the theory I enunciated as held by Dr. Baldamus was precisely the opposite to that which he attributes to me. So far from saying that "Dr. Baldamus alleged that the Cuckoo had any power of laying an egg of what colour she pleased," I distinctly say (p. 12), after quoting from Dr. Baldamus this theory as upheld by some advocates, "but Dr. Baldamus rejects this opinion, and contends for the older view (viz. that the same Cuckoo lays eggs of one colour and markings only, and so is limited to the nests of but one species); and this he proves by personal experience and observations;" &c. &c.

I need not refer to the remaining portion of the review in question, though again the instance adduced of an eye-witness having seen the Cuckoo first lay her egg on the ground, and then carry it off in her beak for deposition in the nest of some older bird, which is quoted from a recent German periodical as a novel fact, might, had the reviewer read my paper, have found sufficient precedent in the interesting story of the charcoal-burner in the forest of Thüringia, as recorded by Dr. Baldamus in 'Naumannia,' 1853, and as detailed by me in full in the paper in question. As I had taken considerable pains in translating as accurately as possible the whole of Dr. Baldamus's paper on this most interesting subject, which to me has a singular fascination—as I conceive I had thoroughly made myself acquainted with Dr. Baldamus's views before I wrote my paper—and as I was especially careful not to mar the question by any opinions of my own, but merely to present the theory of the eminent German ornithologist for the consideration and examination of others, I confess I am anxious not to be misrepresented, and so I confidently appeal to your sense of justice to set me right by publishing this reply in your next number.

I am &c.,

ALFRED CHARLES SMITH*.

---

* [We are exceedingly sorry that our good friend should have to complain that his meaning had been misrepresented in our pages, and gladly insert his disclaimer of the opinion attributed to him. The writer of the notice in question, however, in justice to himself wishes it to be mentioned that he *did read* Mr. Smith's essay, and the impression left on his mind was as stated in the notice. With regard to instances of the Cuckoo being seen to lay its egg on the ground, we must take leave to remark that the very circumstantial account given by an eye-witness which is mentioned in our last number (p. 375) appears to us to stand as a matter of evidence on a very different ground from the story of the nameless Thuringian charcoal-burner, who did not himself tell it to Dr. Baldamus, but to a third person, Herr Mädel, from whom the Doctor received it (Naumannia, 1853, p. 315, note).—ED.]

Mr. Blyth has been good enough to communicate to us the following extract from a letter received by him from Allan Hume, Esq., C.B., dated " Bareilly, May 14th, 1867 :"—

"I have just received a copy of 'The Ibis' for January 1867; and two points in your notes on Dr. Jerdon's work drew my attention.

"1. As to the nidification of *Phyllopneuste rama* (*suprà*, p. 24), Jerdon is *not* right. This very year, on the 1st of April, at Etawah, my friend Mr. H. E. Brookes (well known to both Messrs. Hancock and Tristram as an ardent ornithologist) shot the male on the nest; and I saw the bird, nest, and eggs within an hour, and visited the spot later. The nest was placed in a low thorny bush about a foot from the ground, on the side of a sloping bank in one of the large dry ravines that in the Etawah district fringe the river Jumna for a breadth of from one to four miles. The nest was nearly egg-shaped, with a circular entrance near the top. It was loosely woven with coarse and fine grass, and a little of the fibre of the "Sun" (*Crotalaria juncea*), and very neatly felted on the whole interior surface of the lower two-thirds with a compact coating of the down of flowering grasses, and little bits of spiders' web. It was already about five inches in its longest, and three inches and a half in its shortest diameter. It contained three fresh eggs, which were white, very thickly speckled with brownish-pink, in places confluent and having a decided tendency to form a zone near the large end. Three or four days later we shot the female at the same spot.

"2. *Melanocorypha torquata* (*suprà*, p. 49). I have generally shot this Lark on the upper part of the Ganges and Jumna Duáb; and this year Mr. Brooks and myself shot several at Etawah (halfway between Cawnpore and Agra). I agree with you that the Indian bird is certainly not *Alauda bimaculata*; but I think that this latter is larger and clearly distinct from *Calandrella brachydactyla*, and I do not think that *M. torquata* is so much smaller than *M. calandra*. However, of the latter I have no specimens, and I therefore subjoin measurements of *M. torquata* taken in the flesh, maxima and minima of some eight specimens. Length 7″ to 7½″. Expanse 14″ to 15″.

Wing $4\frac{7}{16}''$ to $4\frac{7}{8}''$ (second and third primaries longest, the first very minute). Tail of twelve feathers, its length from vent $2''$ to $2\frac{3}{16}''$. Tarsus $\frac{15}{16}''$ to $1''$. Mid toe $\frac{5}{8}''$ to $\frac{11}{16}''$; its claw $\frac{1}{4}''$. Hind toe $\frac{7}{16}''$, its claw $\frac{1}{2}''$ to $\frac{9}{16}''$. Bill, straight, $\frac{5}{8}''$ to $\frac{11}{16}''$; from gape $\frac{3}{4}''$ to $\frac{13}{16}''$; width at gape $\frac{7}{16}''$ to $\frac{1}{2}''$. The wings when closed reached to within $\frac{1}{2}''$ of end of tail.

"*Alaudula raytal*, as described by Jerdon, is very common along the sandy banks and dunes of the Jumna and other large rivers in the upper provinces, and, like *Esacus recurvirostris*, is found only in such localities.

"I have often procured and preserved fine specimens of the *Pelecanus crispus* in the upper provinces. Jerdon does not include it."

Mr. Blyth informs us that he has requested Mr. Hume to favour him with good adult specimens of all the species of Pelican that he can procure, calling his attention to the remarks on the Indian species of this genus (pp. 178 *et seq. anteà*).

We have to record the deaths of Prince MAXIMILIAN of WIED, and Mr. JOHN MACGILLIVRAY. The Prince, who was born in 1782, had more than fifty years since travelled in Brazil, where he formed a large ornithological collection, which many tourists on the Rhine will remember to have seen at his unpretending residence at Neuwied below Coblenz; for its doors were always thrown open with the greatest liberality to visitors. His Highness subsequently travelled in North America with the same object. Mr. Macgillivray, the naturalist employed in the voyages of the 'Fly' and 'Rattlesnake,' had for more than ten years been living in Australia, and at the time of his death was meditating an expedition to explore the interior of New Guinea. He was son to Prof. William Macgillivray, author of a well-known 'History of British Birds' and many other works.

INDEX.

Abrornis affinis, 28.
—— albogularis, 28.
—— albosuperciliaris, 28.
—— cantator, 28.
—— castaneiceps, 26.
—— chloronotus, 26.
—— flaviventris, 26, 27, 28.
—— griseifrons, 27, 28.
—— maculipennis, 27,28.
—— poliogenys, 28.
—— schisticeps, 28.
—— superciliaris, 26, 27, 28.
—— xanthoschistus, 27, 28.
Acanthylis giganteus, 317.
Accentor modularis, 97, 436.
—— rubidus, 198.
Accipiter castanilius, 372.
—— chionogaster, 372.
—— erythrocnemis, 372.
—— nisus, 52, 194, 424.
—— ventralis, 372.
Acridotheres ater, 39.
—— cinereus, 39.
—— cristatellus, 387.
—— fuscus, 39, 329, 334.
—— ginginianus, 39.
—— philippensis, 387.
—— siamensis, 387.
—— tristis, 138, 299, 329, 334, 342, 359, 437.
Acrocephalus arundinaceus, 19.
—— brunnescens, 18, 19.
—— dumetorum, 19, 303, 453.
—— fasciatus, 21.
—— palustris, 19.
—— stentorius, 78.
—— streperus, 19.
Actinodura egertoni, 371, 437.
—— nipalensis, 371, 437.
Actitis glareola, 169.
—— hypoleuca, 169, 346, 359.
Actiturus bartramius, 240, 285.
Actodromas bonapartii, 285.
—— maculata, 283, 285.
—— minutilla, 285.
Aedon familiaris, 80.
—— galactodes, 62, 74, 80, 445.
Ægialites cantianus, 68, 164, 170, 429.
—— curonicus, 164, 170.
—— fluviatilis, 68.
—— geoffroyi, 343, 359.
—— hiaticula, 165, 429.
—— indica, 170.
—— inornatus, 164.
—— kittlitzi, 251, 252.
—— leschenaulti, 163, 164, 170.
—— minor, 100.
—— minutus, 164.
—— mongolicus, 164.
—— nigrifrons, 165.
—— pecuarius, 68, 250, 251, 252.
—— philippensis, 164.
—— pyrrhothorax, 332, 334.
—— wilsoni, 164.
Ægiothus canescens, 281, 285.
—— exilipes, 376.
—— linaria, 281, 286.
Ægithaliscus erythrocephalus, 138.
Ægithina atricapilla, 303.
Æthopyga gouldiæ, 142.
Agelæus gubernator, 270.
—— phœniceus, 270, 285.
Aimophila tolteca, 246.
Aix formosa, 394, 409.
—— galericulata, 207.
Ajax diana, 12.
—— leucurus, 12.
Alauda arborea, 203.
—— arvensis, 46, 47, 48, 64, 146, 203, 287, 289, 427.
—— bimaculata, 46, 471.
Alauda brachydactyla, 103.
—— cœlivox, 48, 227.
—— coromandeliana, 45.
—— cristata, 100, 101.
—— gulgula, 48.
—— japonica, 203.
—— malabarica, 48.
—— moreatica, 47.
—— raytal, 46.
—— sibirica, 46.
—— sinensis, 46.
—— torquata, 46.
—— triborhyncha, 47.
Alaudula raytal, 472.
Alca impennis, 384.
—— monoceros, 209.
Alcedo bengalensis, 196, 408.
—— ispida, 56, 425.
—— meningting, 319.
Alcippe atriceps, 2, 302, 311.
—— nigrifrons, 2, 302, 311.
—— nipalensis, 2.
Alcurus striatus, 439.
Allotrius ænobarbus, 33.
—— melanotis, 33.
Alsocomus hodgsoni, 142.
—— phœniceus, 149.
Amazilia graysoni, 247.
Ammomanes deserti, 100.
—— fraterculus, 64.
—— isabellina, 64.
—— lusitanica, 45.
—— pallida, 45.
Ammoperdix bonhami, 158.
—— heyi, 67.
Ampelis cedrorum, 276, 285, 289.
—— garrulus, 286.
—— phœnicoptera, 200.
Amydrus tristrami, 366.
Anas acuta, 71, 207.
—— blanchardi, 243.
—— boschas, 71, 176, 243, 286, 430.
—— clangula, 208.

Anas clypeata, 207.
—— crecca, 71, 207, 243, 430.
—— flavirostris, 176.
—— galericulata, 207.
—— glocitans, 231, 394.
—— histrionica, 208.
—— leucostigma, 176.
—— penelope, 207, 430.
—— pœcilorhyncha, 176, 207.
—— regia, 175.
—— rueppelli, 176.
—— sansaniensis, 243.
—— sparsa, 176.
—— strepera, 71.
—— superciliosa, 379.
—— velox, 243.
—— zonorhyncha, 176, 207.
Anastomus coromandelianus, 173.
—— oscitans, 173.
Anous stolidus, 178, 285, 334.
—— tenuirostris, 178, 334.
Anser albifrons, 71, 125, 174.
—— brachyrhynchus, 283.
—— cinereus, 174, 175, 243.
—— cygnoides, 174.
—— ferus, 283.
—— gambeli, 125.
—— gambensis, 375.
—— grandis, 392.
—— hyperboreus, 285.
—— indicus, 175.
—— rossi, 266.
—— segetum, 283, 391, 392.
Anthornis auriocula, 132.
Anthus arboreus, 32, 64.
—— blakistoni, 389.
—— campestris, 64, 237.
—— cecilii, 31.
—— cervinus, 31, 32, 328.
—— japonicus, 32, 198.
—— ludovicianus, 124, 283, 284, 285, 289.
—— novæ-seelandiæ, 379.
—— obscurus, 238.
—— pallescens, 31.
—— pratensis, 31, 32, 63, 281.
—— rosaceus, 32, 328.
—— ruficollis, 31.
—— rufogularis, 31, 63.
—— rufulus, 31.
Anthus rupestris, 238.
—— spinoletta, 124.
Antrostomus carolinensis, 273, 275.
Aphriza virgata, 126.
Aptenodytes chrysocome, 460.
—— nigrivestis, 460.
—— patagonicus, 459, 460.
Apteryx maxima, 132.
Aquila bonellii, 423.
—— chrysaetus, 50, 124, 143, 286, 423, 464.
—— imperialis, 103.
—— mogilnik, 50.
—— nævia, 50, 53.
—— nævioides, 50, 247.
—— pennata, 51, 444.
Arachnothera pusilla, 322, 334.
Arboricola æruginosa, 159.
—— atrogularis, 159.
—— brunneipectus, 158, 159.
—— charltoni, 160, 313.
—— chloropus, 158.
—— crudigularis, 160.
—— intermedia, 159.
—— javanica, 159.
—— personata, 159.
—— punctulata, 160.
—— rufogularis, 158, 159.
—— sphenura, 160.
—— torqueola, 159.
Archibuteo lagopus, 286, 465.
—— sancti-johannis, 465.
Ardea alba, 384.
—— atricapilla, 351, 359.
—— bubulcus, 429.
—— cinerea, 70, 282, 429.
—— garzetta, 429.
—— goisagi, 173, 309.
—— herodias, 287.
—— melanophis, 173.
—— melanotis, 173.
—— minor, 244.
—— nivea, 172.
—— purpurea, 70.
—— schistacea, 338.
Ardeola grayi, 172.
—— lepida, 342, 359.
—— leucoptera, 172, 333.
—— malaccensis, 173.
—— minuta, 342.
—— podiceps, 342.
Ardetta sinensis, 173, 231.
Artamus leucogaster, 324.
—— leucopygialis, 324.
Arundinax aedon, 19.
Arundinax olivaceus, 19, 328, 453.
Asio brachyotus, 55, 195, 424.
—— capensis, 424.
—— otus, 54, 195.
Astur nisus, 194.
Asturina nitida, 273.
Asyndesmus torquatus, 131.
Athene castaneonotus, 295.
—— castanopterus, 295, 311.
—— cuculoides, 312, 313, 406.
—— cunicularia, 270.
—— hypogæa, 270.
—— noctua, 55.
—— novæ-zelandiæ, 379.
—— persica, 55, 101, 424.
—— radiata, 311.
—— whitelyi, 313.
—— whitneyi, 131.
Automolus rufescens, 130.

Bambusicola sonorivox, 160.
Batrachostomus moniliger, 311.
Bernicla brenta, 271, 286.
—— canadensis, 285.
—— hutchinsi, 271.
—— leucoparia, 271.
—— leucopsis, 283.
—— nigricans, 266, 271.
Bessornis albigularis, 89, 91.
Biziura lobata, 413.
Bonasia sylvestris, 204.
Botaurus lentiginosus, 244, 285.
—— pœcilopterus, 379.
—— stellaris, 244, 430.
Brachyotus cassini, 275.
—— vulgaris, 286, 464.
Brachypodius melanocephalus, 441.
—— poiocephalus, 8.
Brachypternus aurantius, 297.
—— ceylonus, 297.
Brachypteryx albifrons, 12.
—— palliseri, 303, 311.
—— sepiaria, 1, 2.
Bubo ascalaphus, 54.
Bucco aurifrons, 297.
Bucephala albeola, 283, 285.
—— clangula, 286.

Bucephala islandica, 286, 376.
Buceros gingalensis, 296.
Budytes aureocapilla, 30.
—— cinereocapilla,30,63.
—— citreola, 328.
—— citreoloides, 30.
—— flava, 63, 104, 427.
—— melanocephala, 30.
—— melanotis, 30.
—— taivana, 30.
—— viridis, 30.
Bulaca seloputo, 316,334.
Buphus coromanda, 70.
Burnesia lepida, 23.
Butalis grisola, 361.
Buteo borealis, 270, 274.
—— elegans, 270.
—— ferox, 51, 66.
—— lineatus, 270.
—— montanus, 270.
—— pennsylvanicus, 273, 274.
—— vulgaris, 51.
Butorides javanicus, 173. 333.

Caccabis chukar, 402.
—— petrosa, 101, 428.
Calamodyta affinis, 19,21.
—— melanopogon, 77.
—— phragmitis, 78.
—— stentoria, 63.
Calamoherpe arundinacea, 78.
—— brunnescens, 78.
—— cantillans, 408.
—— canturiens, 408.
—— palustris, 77.
—— strepera, 78.
—— turdoides, 19.
Calandrella brachydactyla, 46, 64, 428, 471.
—— pispoletta, 46.
—— reboudia, 64, 93.
Calidris arenaria,170,286.
Callacanthis burtoni, 45, 184.
Calliope kamtschatkensis, 16, 453.
—— pectoralis, 453.
Callipepla californica, 270.
—— gambeli, 270.
Calœnas nicobaricus, 332.
Calornis affinis, 330.
—— cantor, 330.
Caprimulgus albicollis, 107.
—— asiaticus, 318, 334.
—— europæus, 425.
Caprimulgus isabellinus, 56.
—— jotaka, 195.
—— ruficollis, 425.
Campylorhynchus brevipennis, 130.
Carbo bicristatus, 210.
—— cormoranus, 210.
—— sulcirostris, 395.
Cardinalis virginianus, 287, 289.
Carduelis elegans, 184, 427.
Carpodacus californicus, 270.
—— cassini, 266, 270.
—— erythrinus, 44, 138, 141.
—— purpureus, 270.
—— roseus, 44.
—— rubicilla, 44.
Carpophaga ænea, 148.
—— bicolor, 332.
—— ianthina, 149.
—— insignis, 149.
—— myristicivora, 332, 334.
—— novæ-seelandiæ,379.
—— pusilla, 148.
—— sylvatica, 148, 332.
Casarca leucoptera, 176.
—— rutila, 171.
—— scutulata, 176.
Catarrhactes pomarinus, 292.
Cathartes atratus,273,274
—— aura, 273, 274, 288.
—— burrovianus, 376.
—— californianus, 254.
Centropus ægyptius, 55.
—— andamanensis, 321, 334.
—— chlororhynchus,298.
—— rufipennis, 298, 321.
Cepphus columba, 200.
—— grylle, 210.
Ceratorhyncha monocerata, 194, 209.
Cercomela asthenia, 97.
Certhia familiaris, 196, 313.
—— himalayana, 142.
—— spilonota, 461.
Certhilauda desertorum, 64.
Certhiola bahamensis, 264, 276.
—— flaveola, 129, 131.
—— portoricensis, 129.
Certhiparus novæ-zelandiæ, 379.
Ceryle alcyon, 273, 275, 285, 288.
—— rudis, 56, 399, 408.
Cettia africana, 23.
—— orientalis, 79, 80.
—— sericea, 23, 79.
Chætornis striatus, 183.
Chætura pelasgia, 270, 288.
—— vauxi, 270.
Chætusia cinerea, 167.
—— flavipes, 166.
—— gregaria, 68, 165.
—— leucura, 69, 165.
Chalcophaps indica, 151, 332.
Chamæpelia passerina, 276, 287, 289.
Charadrius asiaticus, 93, 163.
—— grallarius, 165.
—— hiaticula, 282.
—— indicus, 165, 170.
—— leschenaulti, 332.
—— longipes, 163.
—— melanops, 165.
—— minor, 164.
—— montanus, 131.
—— myops, 165.
—— orientalis, 204.
—— pecuarius, 251.
—— peroni, 164.
—— philippensis, 164.
—— placidus, 165.
—— pluvialis, 68, 163, 282, 429.
—— pyrrhothorax, 164.
—— russatus, 165.
—— tricollaris, 170.
—— veredus, 163.
—— villotæi, 165.
—— virginicus, 283, 284, 285.
—— vociferus, 285.
Chasmorhynchus niveus, 108.
—— variegatus, 108.
Chatorhea caudata,6, 438.
—— earlii, 6.
—— huttoni, 6.
Chaulelasmus streperus, 286.
Chelidon blakistoni, 196.
—— urbica, 281, 282, 364, 425.
Chen albatus, 376.
Chenalopex ægyptiacus, 71.
Chimarrhornis leucocephala, 452.
Chionis alba, 458.

Chionis minor, 458,
Chleuasicus ruficeps, 1.
Chloephaga canagica,376.
Chloropsis cochinchinensis, 9, 10.
—— hardwickii, 9.
—— hodgsoni, 9.
Chlorospiza aurantiiventris, 427.
—— kawarahiba, 202.
—— sinica, 202.
Chordediles henryi, 270.
—— popetue, 270, 275.
Chordiles acutipennis, 107.
—— minor, 107.
—— popetue, 288.
Choriotis australis, 417.
Chroicocephalus atricilla, 271, 277, 285.
—— franklini, 271.
—— ichthyaetus, 177.
—— melanocephalus, 72.
—— philadelphia, 285.
—— ridibundus, 72, 430.
Chrysococcyx cupreus,145
—— lucidus, 379.
Chrysocolaptes delesserti, 297.
—— stricklandi, 297.
Chrysomitris arizonæ,131
—— mexicana, 131, 274.
—— pinus, 267, 268.
—— spinoides, 138, 141.
—— spinus, 201, 427.
—— tristis, 289.
Chrysotis leucocephala, 278.
Chrysuronia humboldti, 247.
Cichlopsis leucogonys, 278, 372.
Ciconia alba, 70, 172, 173, 430.
—— maguari, 172.
—— microscelis, 172.
—— nigra, 70, 382.
Cinclocerthia gutturalis, 372.
—— macrorhyncha, 372.
—— ruficauda, 372.
Cinclosoma setifer, 4.
Cinclus albicollis, 111, 113, 114, 115, 467.
—— albiventris, 114.
—— americanus, 120.
—— aquaticus, 110, 111, 113, 114, 115, 116, 117, 118, 383.
—— ardesiacus, 111, 121.
Cinclus asiaticus,111,119, 120.
—— cashmiriensis, 111, 117, 118.
—— europæus, 113.
—— leucocephalus, 110, 111, 112, 121, 122, 383.
—— leucogaster, 110, 111, 117, 118, 382, 383.
—— leuconotus, 111,122.
—— maculatus, 120.
—— marila, 111, 119.
—— medius, 114.
—— melanogaster, 110, 111, 112, 114, 115, 238, 466.
—— meridionalis, 114.
—— mexicanus, 111, 112, 120, 121.
—— mortoni, 120.
—— pallasi, 110, 111, 118, 119, 120.
—— peregrinus, 112,114, 116.
—— rufipectoralis, 114.
—— rufiventris, 114.
—— rupestris, 114.
—— septentrionalis, 114, 116.
—— sordidus, 111, 118.
—— tenuirostris, 120.
—— townsendi, 120.
—— unicolor, 120.
Circaetus gallicus, 50, 51.
Circus æquipar, 375.
—— æruginosus, 54, 424.
—— cineraceus, 54, 424.
—— cyaneus, 54, 424, 463.
—— hudsonius, 274, 288.
—— swainsoni, 54, 375.
Cissa ornata, 298, 307.
—— puella, 299.
—— pyrrhocyanea, 298.
—— sinensis, 37.
—— venatoria, 307.
Cisticola brunneicephala, 23.
—— homalura, 302, 311.
—— schœnicola, 23, 63, 76, 77, 302, 303.
—— tintinnabulans, 23.
—— tytleri, 23.
Cistothorus palustris. 283.
Cittocincla albiventris, 327, 334.
—— macrura, 12, 327, 328, 444.
Clangula glaucion, 176, 208.
—— histrionica, 208.
Clangula islandica, 284.
Coccothraustes abeillii,43.
—— japonicus, 201.
—— maculipennis, 43.
—— personatus, 201.
—— vulgaris, 369, 397, 427.
Coccystes coromandus, 227.
—— fuliginiventer, 227.
Coccyzus americanus,285, 288.
—— erythrophthalmus, 273, 285.
Cochoa viridis, 32.
Colaptes auratus, 270, 280, 283, 285.
—— mexicanus, 270,280.
Collocalia affinis, 318.
—— francica, 359.
—— fuciphaga, 317.
—— linchi, 317.
—— nidifica, 317, 318.
Collurio erythronotus, 218.
—— hardwickii, 220.
Collyrio borealis, 289.
—— excubitoroides, 270.
—— ludovicianus, 270.
Columba badia, 148.
—— chinensis, 150.
—— gelastes, 149, 204.
—— ianthina, 149.
—— intermedia, 149.
—— leucocephala, 276.
—— leuconota, 149.
—— leucozonura, 149.
—— livia, 66, 67, 101, 149, 428.
—— madagascariensis, 360.
—— nitidissima, 360.
—— œnas, 149, 380.
—— palumbus, 149, 428.
—— pompadora, 148.
—— risoria, 150.
—— rupestris, 142, 149.
—— schimperi, 66.
Colymbus arcticus, 208.
—— pacificus, 266.
—— septentrionalis, 208, 286.
—— torquatus, 286.
Contopus borealis, 283.
—— richardsoni, 270.
—— virens, 270,275,288.
Copsychus ceylonensis, 303.
—— mindanensis, 11, 12.
—— saularis, 11, 12, 303, 327, 328, 409, 443.

Copsychus sechellarum, 337, 359.
Coracias garrula, 425.
Coracopsis barklyi, 341, 359.
—— comorensis, 341.
Corvus agricola, 36.
—— americanus, 279, 287, 289.
—— andamanensis, 34, 328, 334.
—— corax, 66, 101, 281, 282, 286, 428.
—— cornix, 35, 49, 55, 66, 239, 281, 282.
—— corone, 35, 66, 239, 428.
—— culminatus, 34, 35, 138, 329.
—— enca, 35.
—— frugilegus, 36, 65.
—— intermedius, 138, 329.
—— japonensis, 200.
—— levaillanti, 34.
—— macrorhynchus, 200.
—— monedula, 35, 428.
—— neglectus, 227.
—— pastinator, 36.
—— spermologus, 35.
—— splendens, 35, 298, 329, 334.
—— tenuirostris, 35.
—— torquatus, 411.
—— umbrinus, 49, 50, 66.
Corydalla rufula, 31.
—— striolata, 31.
Coturniculus henslowi, 289.
—— passerinus, 276.
Coturnix communis, 67, 428.
—— coromandeliana, 161.
—— japonica, 204.
—— novæ-zelandiæ, 133.
Cotyle concolor, 463.
—— palustris, 363.
—— riparia, 57, 275, 286, 289, 363, 425.
—— ruficollis, 107.
—— rupestris, 57, 103, 363, 425, 463.
—— uropygialis, 107.
Crateropus acaciæ, 101, 104
—— chalybius, 6.
—— fulvus, 6.
—— rubiginosus, 6.
Creadion cinereus, 132.
Crex pratensis, 172, 282.
Criniger cantori, 7.
—— flaveolus, 7, 439.
Crocias guttatus, 5.
Crocopus phœnicopterus, 147.
—— viridifrons, 147.
Cuculus canorus, 55, 195, 375, 425.
—— hepaticus, 244.
—— himalayanus, 142.
—— poliocephalus, 142.
—— pyrrhocephalus, 298.
Culicipeta burkii, 28.
—— cantator, 26.
Curruca viridula, 83.
Cursorius coromandelicus, 163.
—— gallicus, 67, 163, 240, 429.
—— isabellinus, 163.
Curvirostra americana, 266, 267, 289.
—— leucoptera, 267, 268, 289.
Cyanecula dichrosterna, 17.
—— leucocyanea, 86, 426.
—— orientalis, 17.
—— suecica, 17, 62, 86, 238, 394, 453.
Cyanocitta californica, 270·
—— floridana, 264, 270.
—— woodhousii, 270.
Cyanomyia cyanicollis, 128.
—— guatemalensis, 128.
—— quadricolor, 128.
Cyanops asiaticus, 297.
—— flavifrons, 297.
Cyanospiza ciris, 276.
—— cyanea, 276.
Cyanura macrolophus, 270, 280, 376.
—— stelleri, 270, 280.
Cygnus americanus, 285.
—— bewicki, 398.
—— ferus, 243, 283.
—— minor, 398.
—— olor, 398.
Cymindis pucherani, 107.
Cyornis tickelliæ, 463.
Cyphorhinus lawrencii, 372.
—— phæocephalus, 372.
Cypselus affinis, 362.
—— apus, 56, 99, 425.
—— melba, 425.
—— subfurcatus, 227.

Dafila acuta, 207, 286, 399.
Daption capensis, 188, 192, 249.
Demiegretta asha, 333.
Dendrocitta bayleyi, 38, 329, 334.
—— bazlei, 329.
—— formosæ, 37.
—— frontalis, 37.
—— himalayensis, 37.
—— occipitalis, 38.
—— rufigaster, 38.
—— sinensis, 37.
Dendrocolaptes altirostris, 107.
—— picus, 107.
Dendrocygna arcuata, 175, 310.
—— fulva, 175.
—— gouldi, 175.
—— javanica, 175.
—— major, 175.
—— vagans, 175.
Dendrœca æstiva, 273, 276.
—— auduboni, 270.
—— blackburniæ, 273, 275.
—— cærulea, 273, 275.
—— canadensis, 275.
—— castanea, 273, 276.
—— coronata, 266, 270, 272, 273, 275, 283, 289.
—— discolor, 268, 275, 289.
—— maculosa, 273, 275.
—— palmarum, 275, 289.
—— pennsylvanica, 273, 275.
—— pinus, 289.
—— striata, 268, 273, 275, 283.
—— superciliosa, 275, 277.
—— tigrina, 275.
—— virens, 273, 275, 283, 284, 285.
Dicæum coccineum, 405, 406.
—— cruentatum, 405.
Dicrurus andamanensis, 323, 334.
—— cærulescens, 306, 311, 468.
—— cristatus, 305.
—— edoliiformis, 305, 468.
—— leucopygialis, 306, 311, 468.
—— lophorhinus, 468.
—— macrocercus, 136, 305, 311, 441.
—— minor, 305, 311.
—— musicus, 460.
Didus ineptus, 146.

Diomedea brachyura, 226.
—— chlororhynchus, 186, 189, 191, 193.
—— cornicoides, 186, 192.
—— exulans, 185, 189, 193, 252, 458, 460.
—— fuliginosa, 186, 191, 192, 458, 460.
—— melanophrys, 185, 191, 192.
Dolerisca cervina, 128.
—— fallax, 128.
Dolichonyx oryzivorus, 273, 276, 289.
Dromas ardeola, 166, 332, 351, 359.
Dromolæa chrysopygia, 61, 93.
—— leucocephala, 92.
—— leucopygia, 92.
—— leucura, 14, 102.
—— lugens, 102.
—— monacha, 58, 92.
—— opistholeuca, 14.
Drymœca brevicaudata, 21, 22.
—— eremita, 76, 77.
—— gracilis, 76, 77.
—— inquieta, 77.
—— robusta, 302.
—— striaticeps, 76, 77.
—— sylvatica, 302, 311.
—— valida, 302, 311.
Drymoipus inornatus, 455.
Dumetia albogularis, 3, 301.
—— hyperythra, 3, 432.
Dumeticola affinis, 19, 20.
—— brunneipectus, 19.
—— flaviventris, 20.
—— fortipes, 20.

Ectopistes migratoria, 266, 276, 285.
Edolius affinis, 323, 334.
—— malabaricus, 323.
—— malayensis, 323.
—— paradiseus, 305, 323.
—— rangoonensis, 323.
—— setifer, 323.
Egretta garzetta, 70.
Elainea fallax, 108.
Elanus cæruleus, 53, 424.
Emberiza aureola, 43, 367.
—— cæsia, 367, 368.
—— cernutii, 42.
—— cia, 88, 141, 368.
—— cinerea, 42, 367.
—— cioides, 141, 202.
—— ciopsis, 202, 393.
Emberiza cirlus, 367.
—— fucata, 42, 141, 202.
—— gigliolii, 393.
—— hortulana, 42, 64, 367, 427.
—— huttoni, 42, 463.
—— miliaria, 367, 427.
—— personata, 42.
—— pusilla, 42, 141.
—— rutila, 42.
—— schœniclus, 7.
—— sordida, 42.
—— spodiocephala, 42.
—— striolata, 367.
—— sulphurata, 203.
—— sulphurea, 203.
Empidonax acadicus, 275.
—— cabanisi, 107.
—— difficilis, 270.
—— flaviventris, 270, 273, 276.
—— pectoralis, 247.
—— pusillus, 270.
—— pygmæus, 131.
—— trailli, 270, 273, 276.
Enicurus chinensis, 372.
Enneoctonus anderssoni, 224.
—— arenarius, 223.
—— collurio, 365.
—— crassirostris, 220.
—— cristatus, 212.
—— lucionensis, 212.
—— phœnicurus, 216.
—— superciliosus, 219.
Eophona melanura, 390.
Eopsaltria australis, 133.
Ephialtes lempiji, 316, 409.
—— rufitorques, 409.
Eremophila cornuta, 283, 289.
Erpornis xantholeuca, 33.
Erythacus rubecula, 62, 83.
Erythrœna pulcherrima, 337, 345, 356, 359.
Erythronota edwardsi, 128.
—— niveiventris, 128.
Erythrospiza githaginea, 65, 103.
—— rhodoptera, 45.
Erythrosterna parva, 360.
Esacus recurvirostris, 165, 472.
Estrelda amandava, 41, 331, 334.
—— flavidiventris, 41.
—— formosa, 41.
—— punicea, 41.
Eudynamis orientalis, 321.
—— taitensis, 379.
Eulabes andamanensis, 331, 334.
—— intermedia, 40, 331.
—— javanensis, 331.
—— ptilogenys, 40, 299, 331.
—— religiosa, 40, 331.
Eupherusa cupreiceps, 130.
Euplocamus swinhoii, 232, 409.
Eupodotis edwardsi, 162.
Eurhinorhynchus griseus, 235.
—— orientalis, 234, 235.
—— pygmæus, 168, 169, 234.
Eurycercus burnesi, 7.
Euryzona canningi, 333, 334.
Euspiza americana, 274, 276, 368.
—— aureola, 43.
—— luteola, 43, 184, 313.
—— melanocephala, 313, 368.
—— sulphurata, 203.
Eutolmaetus bonellii, 183.
Excalfactoria australis, 417.
—— chinensis, 161.
—— minima, 161.

Falcinellus igneus, 282, 430.
Falco æsalon, 52, 236, 281, 282.
—— anatum, 274, 282, 288, 465.
—— ater, 253.
—— barbarus, 51, 424.
—— candicans, 281, 283, 284, 285.
—— columbarius, 273, 274, 288.
—— communis, 194.
—— femoralis, 273.
—— gyrfalco, 286.
—— islandicus, 281, 466.
—— lanarius, 49, 52, 424.
—— melanogenys, 465.
—— minor, 465.
—— nigriceps, 465.
—— peregrinus, 51, 143, 194, 281, 282, 315, 388, 424, 465.
—— sacer, 52.
—— sparverius, 273, 288.

Falco subbuteo, 424.
Ficedula ambigua, 24.
—— coronata, 197.
Foudia madagascariensis, 346, 359.
—— sechellarum, 353, 359.
Francolinus perlatus,406.
—— phayrii, 158.
—— pictus, 157, 158,160.
—— sinensis, 158.
—— vulgaris, 157, 158, 160.
—— yemensis, 158.
Franklinia buchanani, 24, 455.
—— cleghorniæ, 24.
Fregilus graculus, 428.
—— himalayanus, 38, 136, 137, 142.
Fringilla cælebs, 369.
—— chloris, 139.
—— kawarahiba, 202.
—— melanoleuca, 45.
—— montifringilla, 201.
—— sanguinea, 45.
—— spinus, 201.
—— spodiogenia, 369, 427.
—— zena, 129.
Fringillauda nemoricola, 45.
Fulica americana, 283.
—— atra, 71, 282, 396, 397, 428.
—— cristata, 396.
Fuligula cristata, 399.
—— ferina, 71, 283.
—— marila, 208.
Fulix affinis, 285.
—— collaris, 285.
—— marila, 286.
Furnarius torridus, 123.

Galeoscoptes carolinensis, 266, 276, 284, 285, 287.
Galerita boysi, 48.
—— chendoola, 48.
—— cristata, 46, 48, 64, 427.
—— macrorhyncha, 48.
—— randoni, 48.
Gallicrex cristata, 171.
Gallinago æquinoctialis, 170.
—— australis, 206.
—— gallinago, 206.
—— gallinula, 70, 206.
—— major, 170.
—— media, 206, 282, 287.
Gallinago nemoricola, 166.
—— scolopacina, 70, 167, 233, 234, 333, 428.
—— solitaria, 206, 233.
—— stenura, 234.
—— wilsoni, 126.
Gallinula angulata, 254.
—— burnesi, 171.
—— chloropus, 358, 359, 428.
—— galeata, 287.
—— minor, 254.
—— phœnicura, 310.
—— pumila, 254.
Galloperdix bicalcarata, 308.
—— spadicea, 157.
—— zeylonensis, 308.
Gallophasis albocristatus, 140, 153, 154.
—— horsfieldi, 153.
—— lineatus, 153.
—— melanonotus, 153.
Gallus æneus, 156.
—— bankiva, 156.
—— ferrugineus,153,154, 155, 156, 157, 307.
—— javanicus, 307.
—— lafayettii, 307.
—— lineatus, 307.
—— sonnerati, 154, 155, 157, 307.
—— stanleyi, 154, 155, 307.
—— temmincki, 156.
—— varius, 154,156,307, 308.
Gambetta flavipes, 283, 285.
Gampsorhynchus rufulus, 1.
Garrulax albogularis, 5, 433.
—— belangeri, 381, 382.
—— cærulatus, 4, 433.
—— chinensis, 402, 434.
—— cinereifrons, 300.
—— delesserti, 300.
—— leucogaster, 381.
—— leucolophus, 381, 433.
—— mitratus, 5.
—— moniliger, 434.
—— ocellatus, 5, 434.
—— pectoralis, 434.
—— perspicillatus, 402, 403.
—— pœcilorhyncha, 4.
—— ruficeps, 5.
—— ruficollis, 5, 433.
Garrulax sannio, 403.
Garrulus bispecularis, 37.
—— brandti, 200.
—— lanceolatus, 37.
—— lidthi, 37.
Gecinus canus, 195.
—— squamatus, 138.
—— vaillanti, 425.
Gelastes tenuirostris, 72.
Gelochelidon anglica, 177.
Geocichla albogularis, 325.
—— citrina, 325.
—— innotata, 325.
Geopelia placida, 416.
—— striata, 342, 359.
—— tranquilla, 250, 416.
Geothlypis æquinoctialis, 107.
—— macgillivrayi, 270.
—— philadelphia, 270, 274, 276, 283.
—— trichas, 275, 289.
—— velata, 107.
Geotrygon veraguensis, 130.
Geronticus papillosus, 174.
Gerygone assimilis, 132.
Glareola orientalis, 163.
—— pratincola, 163, 429.
Glaucidium brodiei, 142.
Gorsachiusmelanolophus, 173, 309.
Gracula cinerea, 39.
—— dubia, 331.
—— indica, 40.
—— javana, 40.
—— religiosa, 40.
Graculus carbo, 181, 286.
—— carboides, 181.
—— carunculatus, 460.
—— fuscicollis, 181.
—— javanicus, 181.
—— pygmæus, 181.
—— sinensis, 181.
Grallaria gigantea, 130.
Grallaricula costaricensis, 130.
Grammatoptila striata, 1.
Grandala cœlicolor, 12.
Graucalus macæi, 322.
Grus cinerea, 70, 429.
—— leucogeranus, 166.
—— monachus, 413.
—— virgo, 413, 429.
Guiraca cærulea, 276.
—— ludoviciana, 274, 276, 289.
Gygis candida, 342.

Gymnorhis superciliaris, 42.
Gypaetus barbatus, 413.
Gyps bengalensis, 36.
—— fulvus, 50.

Hæmatopus longirostris, 166.
—— ostrealegus, 69, 166, 282.
Hæmatornis cheela, 314, 315.
—— elgini, 314, 315, 334.
Hæmatospiza sipahi, 43.
Hæmophila tolteca, 246.
Halcyon atricapillus, 319.
—— coromandelianus, 319.
—— fuscus, 319.
—— leucocephalus, 318.
—— vagans, 379.
Haliaetus albicilla, 281, 282.
—— leucocephalus, 288.
—— leucogaster, 315.
Halieus africanus, 181.
Haliplana panayensis, 347, 359.
Harelda glacialis, 208, 286.
Harporhynchus berlandieri, 270.
—— crissalis, 270.
—— longirostris, 270.
—— ludovicianus, 270.
—— redivivus, 270.
—— rufus, 270, 274, 284, 285.
Heliodoxa henryi, 247.
—— jacula, 247.
Heliomaster longirostris, 128.
Helmintherus vermivorus, 275.
Helminthophaga bachmani, 275.
—— celata, 266, 280.
—— chrysoptera, 273, 275.
—— peregrina, 274, 275, 280.
—— ruficapilla, 283.
Hemipodius atrogularis, 161.
Hemixus flavala, 7, 439.
Henicurus guttatus, 29, 371.
—— maculatus, 29, 371.
—— nigrifrons, 29.
—— ruficapillus, 29.
Henicurus schistaceus, 29, 404.
—— scouleri, 16, 29, 371.
—— sinensis, 371, 404.
—— speciosus, 404.
Herodias alba, 387.
—— andamanensis, 333, 334.
—— concolor, 333.
—— egrettoides, 172.
—— garzetta, 333.
Herpornis xantholeuca, 33.
Hesperiphona affinis, 43.
—— icteroides, 43, 140.
—— vespertina, 43, 266.
Hetærornis albofrontata, 39.
Heteromorpha unicolor, 431.
Hiaticula pusilla, 164.
—— ruficapilla, 164.
Hieracidea novæ-zelandiæ, 379.
Hieraetus morphnoides, 183.
—— pennatus, 183.
Himantopus candidus, 69, 169, 429.
Hirundo æquatorialis, 247.
—— andamanensis, 316, 334.
—— bicolor, 273, 275, 285, 289.
—— cahirica, 56, 57, 124, 361, 363.
—— daurica, 142, 363.
—— erythropygia, 306.
—— filifera, 371.
—— fluvicola, 462, 463.
—— gutturalis, 411.
—— horreorum, 124, 273, 275, 283, 289.
—— hyperythra, 306.
—— javanica, 196.
—— lunifrons, 274.
—— riocourii, 56, 124.
—— rufa, 124.
—— ruficeps, 463.
—— rufula, 57, 362, 363.
—— rustica, 57, 99, 196, 281, 282, 317, 361, 425.
—— rutila, 107.
—— urbica, 196.
Histrionicus torquatus, 284, 286.
Hoplopterus malabaricus, 165.
—— spinosus, 68, 165.
Horeites brunneifrons, 22.
Horeites pollicaris, 22.
—— robustipes, 22.
—— schistilata, 22.
Horornis assimilis, 21.
—— flaviventris, 20, 21.
—— fortipes, 20, 21.
—— fuliginiventer, 21, 25.
—— fulviventer, 21, 25.
—— montanus, 22.
Houbara macqueeni, 162.
Hydrobata albicollis, 114.
—— asiatica, 120.
—— cashmiriensis, 117.
—— cinclus, 113, 116, 117.
—— mexicana, 120.
Hydrochelidon fissipes, 73, 286.
—— fluviatilis, 177.
—— indica, 177.
Hydrocissa coronata, 296.
Hydrophasianus sinensis, 170, 389.
Hylotomus pileatus, 278.
Hypolais elaica, 74, 81, 82.
—— icterina, 81.
—— italica, 81.
—— obscura, 81.
—— olivetorum, 81, 82.
—— pallida, 81, 82.
—— polyglotta, 81, 82.
—— upcheri, 74, 81, 90.
Hypotriorchis eleonoræ, 380.
—— severus, 142.
—— subbuteo, 381.
Hypsipetes crassirostris, 344, 348, 359.
—— ganeesa, 7.
—— holti, 7.
—— maclellandi, 7.
—— nilgiriensis, 7.
—— olivacea, 344.
—— psaroides, 439.

Ianthia cyanura, 16, 197.
—— rufilata, 16.
Ibidorhynchus struthersi, 168.
Ibis guaruana, 271.
—— leucon, 174.
—— nippon, 413.
—— ordi, 271.
Icteria longicauda, 270, 279.
—— viridis, 270, 279.
Icterus baltimore, 274, 276, 289.
—— cucullatus, 276.
—— dominicensis, 129.

Icterus hypomelas, 378.
—— portoricensis, 129.
—— pustulatus, 372.
—— spurius, 274, 276.
Ictinia mississippiensis, 247.
Idiopsar brachyurus, 377.
Indopicus carlotta, 297.
Iole cinerea, 7.
—— virescens, 7.
—— viridescens, 7.
Iora innotata, 10.
—— lafresnayii, 10.
—— scapularis, 10.
—— typhia, 10, 442.
—— viridis, 10.
—— viridissima, 10.
—— zeylanica, 10, 464.
Irania finoti, 89.
Irena malayensis, 326.
—— puella, 326.
Ixulus flavicollis, 33.
—— occipitalis, 33.
—— striatus, 33.
Ixus barbatus, 426.
—— chrysorrhoides, 8, 232.
—— fisqueti, 8.
—— hæmorrhous, 8.
—— luteolus, 7.
—— monticolus, 8.
—— pyrrhotis, 8.
—— virescens, 8.

Junco hyemalis, 267, 268, 270, 280.
—— oregonus, 270, 280.
Jynx torquilla, 55, 103, 425.

Kelaartia penicillata, 7.
Ketupa ceylonensis, 184.
—— flavipes, 184.
—— javanensis, 184.

Lagopus albus, 286.
—— hyperboreus, 286.
—— islandorum, 281.
—— leucurus, 266.
—— mutus, 286.
Lamprotornis pyrrhopogon, 201.
Lanius anderssoni, 224, 226.
—— arenarius, 211, 223, 226.
—— auriculatus, 58, 102, 104, 426.
—— bengalensis, 212.
—— bentet, 219.
Lanius bucephalus, 200, 211, 218.
—— collurio, 58, 211, 218, 426.
—— collurioides, 220.
—— crassirostris, 220, 222.
—— cristatus, 211, 212, 213, 215, 220, 222, 224, 225, 226, 303, 322.
—— dealbatus, 57, 100, 102.
—— emeria, 8.
—— excubitor, 57, 218, 364, 425.
—— excubitoroides, 285.
—— ferox, 220, 222.
—— ferrugiceps, 213.
—— fulvus, 212.
—— hypoleucus, 220.
—— isabellinus, 211, 224, 225, 226, 313.
—— jeracopis, 226.
—— jocosus, 8.
—— leucorhynchus, 324.
—— lucionensis, 211, 215, 217, 226, 304, 322, 468.
—— magnirostris, 211, 220, 221, 222, 226.
—— melanotis, 212, 224.
—— melanthus, 405.
—— meridionalis, 57, 364, 425.
—— minor, 58, 365.
—— nubicus, 58, 365.
—— personatus, 58.
—— phœnicurus, 211, 212, 215, 216, 217, 218, 219, 226.
—— rufus, 58, 212, 365.
—— rutilans, 218.
—— schach, 404, 405.
—— schwaneri, 223, 226.
—— strigatus, 220, 222.
—— superciliosus, 211, 212, 213, 218, 219, 223, 226, 304.
—— tigrinus, 221, 222.
—— vittatus, 220.
Larus argentatus, 72.
—— audouini, 72.
—— brachyrhynchus, 266
—— brunneiceps, 177.
—— californicus, 266.
—— canus, 283.
—— dominicanus, 459.
—— eburneus, 253.
—— fuscescens, 72, 177, 314.
—— fuscus, 72, 176, 314, 430.
Larus glaucus, 286.
—— ichthyaetus, 177.
—— lachrymosus, 177.
—— leucopterus, 286.
—— marinus, 286.
—— melanurus, 194, 210.
—— michahellesi, 72.
—— minutus, 248.
—— niveus, 210.
—— occidentalis, 210, 271.
—— pacificus, 459.
—— ridibundus, 72, 177.
—— smithsonianus, 271.
Larvivora cyana, 16, 453.
—— gracilis, 16.
—— superciliaris, 16.
Laticilla burnesi, 7.
Layardia rufescens, 300.
Leptopteryx leucorhynchus, 324.
Lestris antarcticus, 132, 459.
—— catarrhactes, 185, 459.
—— parasiticus, 459.
Leucocerca fuscoventris, 184.
—— leucogaster, 464.
—— pectoralis, 464.
Leucosticte brunneinucha, 202.
Lichnotentha picata, 14.
Ligurinus sinicus, 202.
Limicola pygmæa, 234.
Limosa ægocephala, 168, 282.
—— lapponica, 167, 388.
—— uropygialis, 167, 388.
Linota cannabina, 65, 427.
—— rufescens, 427.
Liothrix argentauris, 33.
—— luteus, 33.
Lipaugus rufescens, 123.
—— subalaris, 123.
—— unirufus, 123.
Lobipes hyperboreus, 169.
Lobivanellus cinereus, 165.
—— inornatus, 165.
—— lobatus, 419.
Locustella fasciolata, 21.
—— hendersoni, 20.
—— insularis, 21.
—— macropus, 20.
—— nævia, 20, 73, 427.
—— ochotensis, 20.
Lophodytes cucullatus, 285.

Lophophanes atricristatus, 270.
—— bicolor, 270.
—— cristatus, 34.
—— dichrous, 34.
—— inornatus, 270.
—— melanolophus, 138, 438.
—— rufonuchalis, 34.
—— wollweberi, 34.
Lophophorus cuvieri, 153.
—— impeyanus, 152, 243.
—— lhuysi, 243.
Loriculus asiaticus, 295.
—— edwardsi, 295, 311, 467.
—— galgulus, 295.
—— indicus, 295.
—— pusillus, 295.
—— vernalis, 295, 311, 320.
Loxia americana, 285.
—— bifasciata, 43.
—— himalayana, 43.
—— hypoxantha, 40.
—— javanensis, 40.
—— leucoptera, 43, 283, 285.
Luscinia major, 18, 19.
—— philomela, 18, 73.
—— sinuata, 383.
Lusciola cyanura, 197.

Machlolophus xanthogenys, 138.
Macropygia macrura, 307.
—— phasianella, 307.
—— ruficeps, 307.
—— rufipennis, 307, 332.
—— tusalia, 307.
Macrorhamphus griseus, 167, 283, 285.
Malacocercus bengalensis, 311.
—— geochrous, 6.
—— griseus, 6, 300.
—— malcolmi, 6, 438.
—— somervillii, 6.
—— striatus, 300, 311.
—— terricolor, 5, 300, 438.
Malacopterum olivaceum, 2.
Malacortyx superciliaris, 313.
Malurus acaciæ, 6.
—— gracilis, 23.
—— numidicus, 6.
—— squamiceps, 6.
Mareca americana, 285.
Mareca penelope, 207, 283, 398.
Megalæma caniceps, 296, 311.
—— zeylanica, 296, 311.
Megalophus regius, 245.
Megalurus palustris, 6.
—— timoriensis, 6.
—— verreauxi, 1.
Melanerpes formicivorus, 126.
Melanocorypha calandra, 46, 427, 471.
—— maxima, 46.
—— mongolica, 46, 232.
—— tatarica, 46.
—— torquata, 46, 471.
Melanopelargus episcopus, 172.
—— pruyssenaeri, 172.
Meleagris gallopavo, 270.
—— mexicana, 125, 270.
Melicophila picata, 14.
Melizophilus undatus, 426.
Melopelia leucoptera, 276.
Melophus lathami, 233.
Melospiza fallax, 247, 270.
—— heermanni, 247, 270.
—— melodia, 247, 270.
—— palustris, 289.
—— pectoralis, 246.
Menura alberti, 152.
Mergellus albellus, 176.
Mergulus alle, 249.
Mergus albellus, 400.
—— castor, 176
—— cucullatus, 239.
—— serrator, 286.
Meropixus atricapillus, 304.
Merops apiaster, 56, 104, 425.
—— persicus, 56.
—— philippensis, 318.
—— quinticolor, 318.
—— viridis, 55.
Merula albocincta, 143.
—— bengalensis, 5.
—— boulboul, 143.
—— kinnisi, 303.
—— simillima, 303.
—— vulgaris, 5, 303.
—— wardii, 326.
Metopidius indicus, 170.
Metoponia pusilla, 45, 141.
Micrathene whitneyi, 131.
Micrœca macroptera, 133.
Micronisus soloensis, 183.
Microperdix erythrorhyncha, 160.
Micropternus badiosus, 298.
—— gularis, 297, 298.
—— phaioceps, 297, 298.
Microscelis amaurotis, 199
Milvulus tyrannus, 287, 288.
Milvus ægyptius, 53.
—— govinda, 138, 140, 315.
—— ictinus, 424.
—— melanotis, 194, 409, 412.
—— migrans, 53, 253, 424.
Mimus carolinensis, 272, 289.
—— carunculatus, 132.
—— caudatus, 270.
—— polyglottus, 129, 270, 279.
—— portoricensis, 129.
Minla castaneiceps, 33.
—— cinerea, 33.
Mirafra affinis, 45.
—— erythroptera, 45.
Mitrephorus pallescens, 131.
Mixornis gularis, 3.
—— rubricapillus, 3, 432.
Mniotilta varia, 273, 275, 277, 289.
Montifringilla adamsi, 45.
Motacilla aedon, 19.
—— alba, 29, 31, 49, 63, 100, 281, 375, 427.
—— bistrigata, 30.
—— campestris, 30.
—— capensis, 461.
—— certhiola, 20.
—— cœrulecula, 17.
—— cyana, 16.
—— dukhunensis, 29, 31.
—— hodgsoni, 29, 30.
—— kaleniczenckii, 30.
—— leucomela, 450.
—— lugens, 198.
—— lugubris, 30, 63.
—— luzoniensis, 29, 30, 328, 390.
—— maderaspatana, 29, 31.
—— ocularis, 390.
—— personata, 29, 31.
—— proregulus, 252.
—— suecica, 17, 62.
—— sulphurea, 63.
—— superciliosa, 252.
—— vidua, 63.
Muelleripicus hodgii, 320, 334.

Muelleripicus hodgsoni, 320.
—— javensis, 320.
Munia acuticauda, 41.
—— formosana, 40.
—— kelaarti, 40, 299.
—— leuconota, 331.
—— malacca, 40.
—— pectoralis, 40, 299.
—— striata, 41, 331.
Muscicapa atricapilla, 426.
—— cinereoalba, 199.
—— collaris, 57, 360, 361.
—— cyanomelæna, 199.
—— grisola, 199.
—— hæmorrhousa, 8.
—— luctuosa, 361.
—— luteola, 390.
—— melanictera, 8.
—— melanoleuca, 199.
—— mugimaki, 390.
Muscicapula superciliaris, 141, 463.
Mycerobas melanoxanthus, 43, 140.
Mycteria australis, 172.
—— ephippiorhyncha, 172.
Myiagra azurea, 324.
—— tytleri, 324, 334.
Myiarchus cinerascens, 270.
—— crinitus, 273, 275.
—— cristatus, 270.
Myiobius nigriceps, 108.
—— stolidus, 108.
Myiodioctes canadensis, 273, 276.
—— mitratus, 273, 275, 289.
Myiomela leucura, 12, 444.
—— montium, 12.
Myiophonus brevirostris, 184.
—— cæruleus, 184.
—— horsfieldi, 312.
—— temmincki, 143.
Myiothera epilepidota, 2.
—— grisea, 2.
Myzanthe ignipectus, 142.
Myzornis pyrrhoura, 33.

Nauclerus furcatus, 273, 275, 285.
Nectarinia dussumieri, 336, 341, 351, 359.
—— osea, 342.
—— pectoralis, 322.
—— seychellensis, 337.
Nemoricola indica, 31.
Nemura cyanura, 197.
Neophron percnopterus, 50, 138, 249, 423.
Neopus malaiensis, 140.
Neornis assimilis, 22.
—— flavolivacea, 21, 22, 24.
—— montana, 22.
Nephocœtes niger, 275.
Nestor meridionalis, 379.
—— superbus, 132.
Nettapus coromandelianus, 175, 310.
Nettion carolinensis, 283.
—— crecca, 283.
Ninox affinis, 316, 334.
—— scutellatus, 316.
Nisoides moreli, 129.
Nisoria undata, 75, 86.
Notodela diana, 12.
Notornis mantelli, 144.
Nucifraga hemispila, 36, 139, 142.
—— immaculata, 36.
—— multimaculata, 142.
Numenius arcuatulus, 168.
—— arcuatus, 70, 167, 168, 170, 282, 346, 359, 391, 398.
—— borealis, 283, 285.
—— cassini, 398.
—— hudsonicus, 283, 284, 285.
—— lineatus, 167, 168, 169, 170.
—— major, 167, 168, 205, 391, 398.
—— phæopus, 168, 282, 346, 359.
—— tenuirostris, 168.
—— uropygialis, 398.
Nyctale acadica, 285, 288.
Nyctea nivea, 281, 286, 288, 464.
Nyctibius bracteatus, 372.
Nycticorax griseus, 70, 231, 429.
—— violaceus, 285.
Nyroca australis, 413.

Oceanites oceanica, 285.
Ochromela nigrorufa, 312.
Ocydromus australis, 379.
Œdemia fusca, 208.
—— nigra, 283.
Œdicnemus crepitans, 67, 101, 166, 170, 429.
—— indicus, 166.
Œnanthe melanoleuca, 14.
—— pyrrhonota, 13, 14.
Onocrotalus minor, 180.
Onychoprion anasthætus, 334.
—— fuliginosus, 249.
—— melanauchen, 334.
Oporornis formosus, 274, 275.
Orægithus pusillus, 45.
Oreicola jerdoni, 14, 448.
—— luctuosa, 14.
—— melanoleuca, 14.
Oreocincla inframarginata, 325, 334.
—— spiloptera, 303.
Oreocœtes cinclorhynchus, 143, 464.
—— erythrogastra, 143.
Oreophilus tenuirostris, 163.
Oriolus acrorhynchus, 10.
—— andamanensis, 326, 334.
—— ceylonensis, 11.
—— chinensis, 10, 11.
—— coronatus, 326.
—— frontalis, 11.
—— furcatus, 468.
—— galbula, 10, 326, 364, 425.
—— hippocrepis, 11, 326.
—— horsfieldi, 326.
—— indicus, 10, 11.
—— kundoo, 10, 442.
—— macrurus, 11, 326, 327.
—— melanocephalus, 11, 327, 442, 443.
—— ocellatus, 161.
—— sanguinolentus, 11.
—— traill, 11, 443.
Orpheus amaurotis, 7, 199.
Orthotomus longicauda, 22, 302, 454, 455.
—— patia, 22.
—— phyllorrhapheus, 22.
Ortygis luzoniensis, 161.
Ortygometra flammiceps, 171.
—— griseopectus, 171.
—— porzana, 282.
—— superciliaris, 171.
Ortygornis ponticeriana, 158.
Ortyx texensis, 270.
—— virginianus, 270, 279, 379.
Osmotreron chloroptera, 148, 331.
—— flavogularis, 148.

Osmotreron malabarica, 147, 148.
—— phayrii, 147, 148.
—— pompadora, 148.
Ossifraga gigantea, 376.
Otis arabs, 429.
—— australiana, 133.
—— tarda, 162, 429.
—— tetrax, 163, 429.
Otocompsa fuscicaudata, 8.
—— jocosa, 8, 312, 326, 440.
—— leucogenys, 440.
—— monticola, 440.
Otocorys alpestris, 47.
—— bilopha, 47.
—— longirostris, 47.
—— penicillata, 47.
Otomela arenaria, 223.
—— crassirostris, 221.
—— cristata, 213.
—— lucionensis, 215.
—— phœnicura, 216.
—— schwaneri, 223.
Otus brachyotus, 281.
—— vulgaris, 281.
—— wilsonianus, 275, 288.
Oxylophus glandarius, 55, 425.

Pagophila eburnea, 286.
Palæornis affinis, 320, 334, 341.
—— alexandri, 319.
—— calthrapæ, 294.
—— erythrogenys, 319, 320.
—— gironieri, 294.
—— nicobaricus, 319.
—— rosa, 12, 389.
—— schisticeps, 142, 389.
—— torquatus, 320, 334.
—— wardi, 341, 359.
Palumbus casiotis, 149.
—— elphinstonii, 149.
—— pulchricollis, 149.
—— torringtoni, 306, 311.
Pandion carolinensis, 275, 288.
—— haliætus, 51, 286, 424, 464.
Panoplites flavescens, 128.
—— jardinii, 128.
—— matthewsi, 128.
Paradoxornis sphenura, 1.
Pardalotus leadbeateri, 255.
—— xanthopygus, 256.
Parra gallinacea, 417.
Parra melanochloris, 170.
—— melanoviridis, 170.
Parula americana, 275, 283, 289.
Parus æmodius, 34.
—— ater, 198.
—— atricapillus, 270.
—— cinereus, 34.
—— elegans, 34.
—— kamtschatkensis, 198.
—— major, 442.
—— melanolophus, 27.
—— minor, 26, 34, 198, 408.
—— monticolus, 138.
—— occidentalis, 270.
—— palustris, 62.
—— quadrivittatus, 34.
—— septentrionalis, 270.
—— ultramarinus, 427.
Passer canicapillus, 42.
—— cinnamomeus, 42, 138.
—— cisalpinus, 65, 369.
—— domesticus, 42, 64, 65, 122, 369.
—— flaveolus, 41.
—— flavicollis, 42, 370.
—— indicus, 41, 138.
—— jagoensis, 249.
—— moabiticus, 370.
—— montanus, 41, 65, 138, 202.
—— rutilans, 42.
—— salicarius, 42, 369, 370.
—— salicicola, 65, 99.
—— simplex, 42.
Passerculus alaudinus, 376.
—— savanna, 276, 289.
Passerella iliaca, 270.
—— schistacea, 270.
—— townsendi, 270.
Pastor griseus, 39.
—— peguanus, 39.
—— pyrrhogenys, 201.
—— roseus, 40, 231.
—— senex, 468.
Pavo cristatus, 151, 152.
—— muticus, 152.
—— nigripennis, 151.
Pelecanus crispus, 178, 180, 472.
—— javanicus, 179.
—— mitratus, 178, 179, 180.
—— onocrotalus, 71, 178, 179.
—— philippensis, 180.
Pelecanus rufescens, 180.
Pelionetta perspicillata, 271, 283, 284, 285.
—— trowbridgii, 271.
Pellorneum fuscocapillum, 301.
—— ruficeps, 432.
Perdicula cambaiensis, 160.
—— erythrorhyncha, 160, 464.
Perdix cinerea, 417.
—— damascena, 244.
—— oculea, 160.
—— olivacea, 159.
—— orientalis, 159.
—— raalteni, 160.
—— thoracica, 160.
Pericrocotus andamanensis, 322, 334.
—— ardens, 184.
—— brevirostris, 184, 322.
—— erythropygius, 463.
—— igneus, 184, 322.
—— minutus, 184.
—— speciosus, 322, 402, 403, 404.
—— xanthogaster, 322.
Perisoreus canadensis, 267, 268.
Pernis cristatus, 183.
Petrocincla cyana, 58, 89, 426.
—— manillensis, 199, 233, 404.
—— saxatilis, 58, 88, 90, 103.
Petrocossyphus cyaneus, 325.
Petronia brachydactyla, 370.
—— stulta, 65, 102, 370.
Peucæa æstivalis, 270.
—— cassini, 270.
—— ruficeps, 270.
Pezophaps solitarius, 146.
Phaethornis cassini, 130.
Phaeton æthereus, 178.
—— flavirostris, 334, 345, 359.
Phalacrocorax æolus, 395.
—— bicristatus, 210, 395.
—— capillatus, 390.
—— carbo, 71, 210, 430.
—— cormoranus, 390.
—— purpuragula, 181.
—— sinensis, 181, 390, 391, 395.
—— stictocephalus, 181.
—— sulcirostris, 181, 395.

Phœnicophæus leucogaster, 298.
Phœnicopterus blythi, 174.
—— minor, 174, 351, 359.
—— pyrrhocephalus, 298.
—— roseus, 70, 174, 430.
Phalaropus fulicarius, 166, 286, 428.
—— hyperboreus, 286, 375.
Phaleris cristatella, 209.
—— tetracula, 376.
Phasianus colchicus, 153.
—— gallus, 233.
—— torquatus, 232, 390, 402.
Philomachus pugnax, 282.
Philomela luscinia, 62, 86.
—— major, 86.
Phlogœnas bartletti, 371.
—— crinigera, 371.
—— cruenta, 371.
Phlogopsis macleanni, 372.
Phœnicura rufiventris, 15.
—— ruticilla, 15.
Phonipara portoricensis, 129.
—— zena, 129.
Phyllopneuste brevirostris, 83.
—— bonellii, 83.
—— coronata, 28, 197.
—— elaica, 24.
—— eversmanni, 28.
—— plumbeitarsa, 28.
—— rama, 24, 28, 471.
—— rufa, 68, 83, 426.
—— schwarzi, 25, 28.
—— sibilatrix, 83.
—— sylvicola, 63.
—— sylvicultrix, 28.
—— tenellipes, 28.
—— trochilus, 62, 81, 82.
—— xanthodryas, 28.
Phyllornis aurifrons, 10, 442.
—— cyanopogon, 9, 10.
—— hardwickii, 10, 442.
—— hodgsoni, 10.
—— icterocephalus, 10.
—— javensis, 9, 10.
—— jerdoni, 10, 441.
—— malabaricus, 10.
—— moluccensis, 10.
Phyllornis sonnerati, 9.
Phylloscopus affinis, 26, 28.
—— borealis, 28.
—— brevirostris, 25.
—— coronatus, 28.
—— fuliginiventer, 28.
—— fuscatus, 21, 25, 28, 408.
—— indicus, 28.
—— lugubris, 28.
—— magnirostris, 28.
—— nitidus, 25, 28.
—— plumbeitarsa, 28.
—— schwarzi, 28.
—— sibiricus, 28,
—— sylvicultrix, 28.
—— tenellipes, 28.
—— tristis, 25, 28.
—— trivirgatus, 28.
—— trochilus, 25.
—— viridanus, 28.
—— xanthodryas, 28.
Pica bactriana, 36.
—— bottanensis, 36.
—— leucoptera, 37.
—— mauritanica, 428.
—— sericea, 236.
—— tibetana, 36.
Picoides arcticus, 268.
Picus anatis, 321.
—— andamanensis, 321, 334.
—— atratus, 321.
—— borealis, 270.
—— brunneifrons, 138, 321.
—— erythronotus, 297.
—— gairdneri, 270,
—— harrisi, 270.
—— himalayanus, 138.
—— leuconotus, 195.
—— macei, 321.
—— major, 195.
—— neglectus, 297.
—— numidicus, 425.
—— nuttalli, 270.
—— pectoralis, 321.
—— pubescens, 270, 285.
—— scalaris, 270.
—— sonnerati, 297.
—— torquatus, 131.
—— uralensis, 195.
—— villosus, 270, 278, 285.
Pinicola canadensis, 266, 267.
—— enucleator, 286.
Pipastes agilis, 31.
—— montanus, 312.
Pipastes trivialis, 31.
Pipilo albigula, 376.
—— arcticus, 270.
—— erythropthalmus, 268, 270.
—— fuscus, 270.
—— mesoleucus, 270.
—— oregonus, 270.
Piprisoma agile, 430.
Pitta bengalensis, 464.
—— mackloti, 416.
—— strepitans, 414, 415, 416.
Platalea leucorodia, 70, 173, 730.
—— major, 204.
—— pygmæa, 235.
Platycercus pacificus, 379.
Platyrhynchus æquinoctialis, 108.
Plectrophanes lapponica, 281, 286.
—— nivalis, 45, 281, 286, 289, 429.
Plectropterus gambensis, 375.
—— rueppelli, 375.
Ploceus baya, 40.
—— bengalensis, 40.
—— manyar, 40.
—— philippinus, 40.
Plotus anhinga, 285.
—— melanogaster, 181.
Pluvianus ægyptius, 68.
—— cinereus, 165.
Podasocys montanus, 131, 376.
Podiceps auritus, 209, 373, 374.
—— californianus, 376.
—— cornutus, 209, 374.
—— cristatus, 71, 208, 286.
—— hectori, 132.
—— holbœlli, 283, 285.
—— minor, 430.
—— nigricollis, 209, 374.
Pogonocichla margaritata, 384.
—— stellata, 384.
Poliaetus ichthyaetus, 316.
Polioptila cærulea, 276.
Poliornis poliogenys, 183, 411, 412.
—— teesa, 412.
Polyplectrum germaini, 157.
Polysticta stelleri, 286.

Pomatorhinus albicollis, 3.
—— albogularis, 3.
—— erythrogenys, 4, 433.
—— ferruginosus, 3.
—— horsfieldi, 301, 311.
—— hypoleucus, 3, 4.
—— melanurus, 301, 311.
—— phayrii, 3.
—— ruficollis, 433.
—— schisticeps, 433.
—— superciliosus, 133.
—— temporalis, 133
Poœcetes gramineus, 289.
Porphyrio hyacinthinus, 428.
—— indicus, 171.
—— martinica, 285.
—— poliocephalus, 171.
—— smaragdinus, 171.
—— smaragnotus, 171.
Porzana akool, 171.
—— amauroptera, 310.
—— bailloni, 389.
—— carolina, 283, 285.
—— fusca, 171.
—— maruetta, 428.
—— phœnicura, 171.
—— pygmæa, 428.
—— rubra, 372.
—— zeylanica, 171, 309, 310.
Potamodus cettii, 427.
—— orientalis, 79.
Pratincola atrata, 13.
—— bicolor, 13.
—— caprata, 13, 14, 445.
—— ferrea, 13, 14, 447.
—— indica, 13, 197, 328, 446.
—— insignis, 13, 446.
—— leucura, 371.
—— melanura, 97.
—— rubetra, 61, 97, 104, 426.
—— rubicola, 13, 61, 97.
Prinia beavani, 454.
—— cinereocapilla, 23.
—— flaviventris, 23.
—— gracilis, 454.
—— socialis, 23, 464.
—— sonitans, 23.
—— stewarti, 23.
Prion banksi, 460.
—— vittatus, 189.
Prionochilus pipra, 306.
Procarduelis nipalensis, 44.
Procellaria æquinoctialis, 187, 192, 251, 459.
—— cinerea, 187.
Procellaria conspicillata, 187.
—— furcata, 190.
—— gigantea, 185, 186, 189.
—— glacialioides, 187.
—— glacialis, 386.
—— hæsitata, 187, 188.
—— leucorrhoa, 376.
—— lessoni, 188.
—— macroptera, 187, 460.
—— mollis, 188, 191.
—— orientalis, 387.
—— parvirostris, 188.
—— pelagica, 387.
Procnias nivea, 108.
Progne cryptoleuca, 264.
—— purpurea, 124, 285, 289.
Proparus chryseus, 33.
Propasser frontalis, 44.
—— murrayi, 44.
—— rhodochlamys, 44.
—— rhodochrous, 44, 141.
—— rhodopeplus, 44.
—— thura, 44.
Propyrrhula subbimachala, 44.
Prosthemadera novæzelandiæ, 379.
Protonotaria citrea, 274, 275.
Psaltriparus minimus, 270.
—— plumbeus, 270.
Psaropholus ardens, 11.
Psittacus agilis, 108.
—— asiaticus, 295, 467, 468.
—— edwardsi, 295.
—— galgulus, 467.
—— indicus, 295, 467, 468.
Pseudoluscinia fluviatilis, 77.
—— luscinioides, 63, 77, 427.
Pseudoscolopax semipalmatus, 166, 167.
Pterocles alchata, 67, 151, 428.
—— arenarius, 67, 103, 428.
—— coronatus, 67.
—— exustus, 67, 151.
—— fasciatus, 151.
—— senegalensis, 67.
Pteruthius æralatus, 32.
—— azureus, 32.
—— erythropterus, 32.
Ptilogonys caudatus, 123.
Ptilonorhynchus holosericeus, 456.
Ptilotis auricomis, 133.
—— fusca, 133.
Ptychorhamphus aleuticus, 376.
Pucrasia castanea, 152.
—— duvauceli, 152, 153.
—— macrolopha, 152, 153, 154.
—— nipalensis, 152, 153.
—— xanthospila, 152.
Puffinura urinatrix, 460.
Puffinus assimilis, 189.
—— chlororhynchus, 359.
—— fuliginosus, 285.
—— major, 384.
—— obscurus, 285, 359.
Pycnonotus atricapillus, 8.
—— bengalensis, 9.
—— chrysorrhous, 9.
—— crocorrhous, 9.
—— finlaysoni, 441.
—— flavala, 7.
—— flavula, 7.
—— hæmorrhous, 8, 440.
—— intermedius, 9, 441.
—— nanus, 33.
—— nigropileus, 9, 441.
—— pusillus, 8, 9.
—— pygæus, 9, 440.
—— ruficaudatus, 7.
Pycnosphrys grammiceps, 28.
Pyctorhis longirostris, 1.
—— sinensis, 1, 6, 431.
Pyranga æstiva, 273, 275, 289.
—— hepatica, 108.
—— rubra, 273, 275, 289.
—— saira, 108.
Pyrgita petronella, 42.
—— petronoides, 42.
Pyrgitopsis simplex, 42.
Pyrophthalma melanocephala, 62.
Pyrrha sinensis, 44.
Pyrrhocorax alpinus, 137, 142.
Pyrrhophæna cinnamomea, 247.
—— graysoni, 247.
Pyrrhospiza punicea, 44.
Pyrrhula erythaca, 43.
—— erythrocephala, 142.
—— europæa, 184.
—— nipalensis, 43.
—— orientalis, 203.
—— sanguinolenta, 203.

Pyrrhulauda affinis, 185.
—— cruciata, 184.
—— grisea, 45, 184, 185.
—— sincipitalis, 185.

Querquedula andamanensis, 333, 334.
—— circia, 176, 408.
—— crecca, 207, 398.
—— cyanoptera, 271.
—— discors, 271, 285.
—— ipecuteri, 333.
—— querquedula, 283.
Quiscalus aglæus, 264, 377.
—— baritus, 264, 377.
—— brachypterus, 377.
—— gundlachi, 377.
—— macrurus, 274.
—— rectirostris, 377.
—— versicolor, 272.

Rallina minahasa, 171.
Rallus aquaticus, 172, 206, 282.
—— featherstonii, 132.
—— indicus, 172.
—— striatus, 172.
Recurvirostra avocetta, 400.
—— sinensis, 401.
Reguloides proregulus, 253, 406, 408.
—— superciliosus, 83, 252, 253, 408.
Regulus calendula, 26, 283, 285.
—— castaneiceps, 26, 28.
—— cristatus, 197.
—— ignicapillus, 240.
—— japonensis, 197.
—— japonicus, 196.
—— modestus, 25, 252, 253.
—— occipitalis, 25, 28.
—— proregulus, 26, 28.
—— superciliosus, 25, 26, 28.
—— trochiloides, 26, 28.
—— viridipennis, 28.
Rhinoptilus bitorquatus, 462.
Rhipidura flabellifera, 379.
Rhodophila melanoleuca, 14, 371, 448.
Rhodostethia rosea, 283, 284, 285, 286.
Rhynchæa bengalensis, 70, 167.
—— sinensis, 404.
Rhynchæa variegata, 167.
Rhynchaspis clypeata, 388.
Rhynchops albicollis, 178.
Rissa tridactyla, 286, 430.
Rollulus superciliosus, 313.
Rostrhamus sociabilis, 273, 274.
Rubigula aberrans, 8, 303.
—— flaviventris, 439.
—— melanictera, 303.
Rupicola sanguinolenta, 372.
Ruticilla aurorea, 15, 87.
—— cæruleocephala, 15, 452.
—— cairii, 87.
—— ferrea, 408.
—— fuliginosa, 16, 452.
—— moussieri, 75.
—— phœnicura, 15, 61, 87, 102.
—— phœnicuroides, 15.
—— rufiventris, 88, 452.
—— semirufa, 75, 87, 88.
—— tithys, 61, 75, 86, 281, 282.

Salicaria affinis, 19.
—— aquatica, 73, 426, 469.
—— cantans, 197.
—— cantillans, 197.
—— cinnamomea, 21.
Salpornis spilonota, 461.
Saltator grandis, 108.
—— icterophrys, 108.
—— olivascens, 108.
Sarcidiornis africanus, 175.
—— melanonotus, 175.
—— regia, 175.
Sarciophorus bilobus, 165.
—— pectoralis, 420, 421.
Saurothera rufescens, 129.
—— vieilloti, 129.
Saxicola albicollis, 61, 426.
—— albigularis, 89.
—— amphileuca, 96.
—— atrogularis, 15, 451, 463.
—— aurita, 61, 96.
—— capistrata, 15, 449, 452.
—— deserti, 15, 60, 95, 448, 449, 450, 451, 452.
—— dumetoria, 14.
—— erythropygia, 13, 61.
—— eurymelæna, 61, 95, 96.
—— halophila, 95.
Saxicola homochroa, 60.
—— isabellina, 58, 59, 60, 75, 91, 94.
—— leucocephala, 58.
—— leucomela, 15, 94, 95, 449, 451, 452.
—— leucopygia, 59.
—— leucura, 59.
—— leucuroides, 14, 15, 313, 448.
—— libanotica, 91, 94, 95.
—— libyca, 61.
—— lugens, 58, 59, 60, 91, 94, 95.
—— monacha, 59, 95.
—— montana, 15, 451.
—— œnanthe, 14, 15, 61, 75, 93, 100, 281, 287, 289, 426, 450, 451, 452.
—— opistholeuca, 14, 313, 463.
—— pallida, 58.
—— philothamna, 60, 93, 94.
—— picata, 14, 448, 450, 452.
—— pyrrhonota, 14.
—— rostrata, 93, 94.
—— rubicola, 197.
—— ruficeps, 93.
—— saltator, 60.
—— saltatrix, 94.
—— stapazina, 60, 61, 95, 101, 103, 426.
—— xanthomelæna, 61, 96.
Scelostrix candida, 184.
Schœnicola platyura, 6, 21.
Scolecophagus cyanocephalus, 270.
—— ferrugineus, 270.
Scolopax rusticola, 206, 282, 428.
—— stenura, 167.
—— sumatrana, 167.
Scops asio, 285.
—— lempiji, 409.
—— semitorques, 409.
Seena aurantia, 177.
Sericulus melinus, 415, 456.
Serinus aurifrons, 45, 89.
—— hortulorum, 427.
Setophaga ruticilla, 272, 273, 275.
Sialia arctica, 13, 270.
—— mexicana, 270.
—— sialis, 270, 275, 287, 289.
Sibia capistrata, 5, 437.

Sisura inquieta, 133.
Sitta aculeata, 270.
—— cæsia, 196.
—— carolinensis, 270.
—— europæa, 196.
—— roseilia, 196.
—— uralensis, 196.
Siurus aurocapillus, 275, 277.
—— ludovicianus, 275.
—— noveboracensis, 272, 273, 275, 289.
Siva cyanouroptera, 33.
—— strigula, 33.
Somateria mollissina, 286.
—— spectabilis, 286.
Spatula clypeata, 71, 207, 286.
Spheniscus demersus, 460.
Sphenocercus apicaudus, 148.
—— cantillans, 148.
—— phasianellus, 148.
—— sphenurus, 148.
Sphenœacus galactodes, 21.
Sphyropicus nuchalis, 270.
—— thyroideus, 376.
—— varius, 270, 275, 283, 287, 288.
Spilornis bacha, 466.
—— bido, 466.
—— cheela, 466.
—— elgini, 334.
—— hoya, 410.
Spilura stenura, 167.
Spindalis portoricensis, 129.
Spiza ciris, 285.
Spizaetus andamanensis, 315, 334.
—— cirratus, 183.
—— limnaetus, 183, 316.
Spizalauda deva, 464.
Spizella breweri, 270.
—— pallida, 266, 270.
—— pusilla, 270.
—— socialis, 268, 276.
Spizixus canifrons, 371.
—— semitorques, 371.
Squatarola helvetica, 286, 359, 429.
Stachyrhis chrysea, 2, 432.
—— nigriceps, 2, 431.
—— præcognitus, 2.
—— pyrrhops, 2, 431.
—— ruficeps, 2, 432.
Stercorarius parasiticus, 430.
Sterna affinis, 177.
—— anglica, 73, 286.
—— antillarum, 277.
—— bengalensis, 177.
—— bergii, 177.
—— cantiaca, 73, 430.
—— caspia, 72, 230, 286.
—— dougalli, 177, 373.
—— elegans, 271.
—— fuliginosa, 285.
—— hirundo, 230, 286.
—— macrura, 286.
—— melanauchen, 230.
—— melanogaster, 177.
—— meridionalis, 459.
—— minuta, 430.
—— paradisea, 177, 286.
—— pelecanoides, 177.
—— regia, 271.
—— velox, 72, 177, 230, 359.
Sternula minuta, 177.
—— sinensis, 230.
Stoparola deserti, 29.
Strepsilas interpres, 286, 332, 351, 359.
Streptopelia barbara, 151.
Strix amauronota, 184.
—— flammea, 55, 238.
—— haasti, 132.
—— rufescens, 194.
Sturnella magna, 270, 285.
—— neglecta, 270.
Sturnia erythropygia, 329.
Sturnopastor contra, 38, 39.
—— jalla, 38.
—— moorii, 39.
—— niger, 39.
—— nigricollis, 39.
—— superciliaris, 38.
Sturnus cinclus, 113, 115, 116, 117, 118.
—— cineraceus, 200.
—— indicus, 38.
—— unicolor, 38, 367, 428.
—— vulgaris, 38, 65, 200, 281, 428.
Sula bassana, 286, 430.
—— fiber, 178.
—— melanops, 249.
—— melanura, 249.
—— sinicadvena, 178.
Surnia ulula, 286, 464.
Suya atrogularis, 23, 455.
Suya fuliginosa, 23.
—— gangetica, 23.
—— gracilis, 63.
Sylvia affinis, 28, 84.
—— aquatica, 468, 469.
—— arundinacea, 19.
—— atricapilla, 84.
—— bowmani, 85.
—— caligata, 24.
—— capistrata, 62.
—— cinerea, 28, 62, 84.
—— conspicillata, 28, 426.
—— coronata, 25.
—— curruca, 28, 62, 84.
—— cyanecula, 17.
—— delicatula, 28.
—— deserticola, 29.
—— doriæ, 84.
—— elaica, 24.
—— eversmanni, 24.
—— helenæ, 85.
—— hortensis, 84, 197.
—— leucocyana, 17.
—— locustella, 20.
—— melanocephala, 84, 101, 426.
—— montana, 19, 21, 22.
—— nigricapilla, 303.
—— orphea, 74, 85, 104, 426.
—— philomela, 18.
—— scita, 24.
—— sibirica, 25.
—— subalpina, 101.
—— subflava, 3.
—— textrix, 24.
—— turdoides, 19.
Symphemia semipalmata, 285.
Sypheotides auritus, 163, 371.
—— bengalensis, 162.
Syrnium aluco, 424.
—— cinereum, 465.
—— fuscescens, 194.
—— nebulosum, 288.
—— rufescens, 194.
Syrrhaptes paradoxus, 241.

Tachypetes aquilus, 285.
Tachyphonus albispecularis, 108.
—— luctuosus, 108.
—— schlagintweiti, 246.
Tadorna casarca, 430.
—— rutila, 71.
Tanagra portoricensis, 129.

Tantalus lactens, 173, 228.
—— leucocephalus, 173, 228.
—— longimembris, 228.
Tarsiger cucullatus, 16, 384.
—— superciliaris, 16.
Tchitrea corvina, 349, 359.
Telephonus cucullatus, 426.
—— tschagra, 365.
Temenuchus albofrontatus, 299, 468.
—— andamanensis, 329, 334.
—— blythi, 39.
—— burmannicus, 39.
—— erythropygius, 330.
—— malabaricus, 39.
—— melanopterus, 39.
—— pagodarum, 39.
—— tricolor, 39.
Tephrodornis affinis, 305.
—— grisola, 322.
—— ponticerianus, 305.
Terekia cinerea, 167.
Tetrao canadensis, 268, 271.
—— franklini, 271.
—— luzoniensis, 161.
—— obscurus, 271.
—— ocellatus, 160.
—— richardsoni, 271.
—— sabinii, 271.
—— umbelloides, 271.
—— umbellus, 271.
—— zeylanensis, 308.
Thalasseus bengalensis, 177.
—— caspius, 376.
—— cristatus, 177.
Thalassidroma furcata, 387.
—— leachi, 190, 191, 289, 292, 387.
—— leucogaster, 189, 459.
—— melania, 386.
—— melanogaster, 185, 189, 191, 459.
—— monorhis, 386.
—— oceanica, 190.
—— pelagica, 190.
—— wilsoni, 252.
Thamnobia cambaiensis, 13, 444, 452.
—— fulicata, 13.
Thamnophilus doliatus, 213.
—— leucopygus, 247.
Thaumalea amherstiæ, 371.
—— picta, 371.
Thaumatias candidus, 128.
—— viridicaudus, 247.
Thresciornis melanocephalus, 174.
—— religiosa, 174.
—— strictipennis, 174.
Thryothorus bewicki, 270.
—— leucogaster, 270.
—— spilurus, 270.
Tickellia hodgsoni, 28.
Timalia gularis, 3.
—— hypoleuca, 1.
—— pileata, 2.
—— similis, 3.
Tinnunculus alaudarius, 54, 101, 142, 424, 446.
—— cenchris, 52, 424.
—— gracilis, 336, 341, 351, 359.
Tockus gingalensis, 296.
Todirhamphus collaris, 319.
Todus hypochondriacus, 129.
—— mexicanus, 260.
Totanus acuminatus, 205.
—— affinis, 169.
—— brevipes, 390.
—— fuliginosus, 390.
—— glareola, 69, 205.
—— glottis, 69, 169, 346, 351, 359.
—— leucurus, 169.
—— ochropus, 69.
—— pulverulentus, 205.
—— stagnatilis, 69, 169.
Tragopan duvauceli, 152.
Treron bicincta, 148.
—— nipalensis, 147.
Tribura luteoventris, 19, 21.
—— squamiceps, 21.
Trichas æquinoctialis, 107.
—— velatus, 107.
Trichophorus gularis, 7.
Trichostoma abboti, 1, 2.
—— celebense, 2.
—— sepiarium, 2.
—— umbratile, 2.
Tringa acuminata, 205.
—— albescens, 168, 309, 389.
—— alpina, 205, 429.
—— canutus, 286.
—— cinclus, 168.
—— damacensis, 168, 170.
—— glareola, 169.
Tringa maritima, 286.
—— minuta, 69, 168, 170, 206, 343, 359, 389.
—— platyrhyncha, 234.
—— pusilla, 389.
—— pygmæa, 168.
—— subarcuata, 168, 386.
—— subminuta, 168, 389.
—— temmincki, 69.
—— variabilis, 205.
Tringoides hypoleucus, 69.
—— macularius, 285.
Trochalopterum affine, 436.
—— cachinnans, 5.
—— chrysopterum, 435.
—— erythrocephalum, 5, 139, 143, 434.
—— imbricatum, 4.
—— jerdoni, 5.
—— lineatum, 4, 436.
—— phœniceum, 5, 436.
—— squamatum, 436.
—— subunicolor, 5, 435.
—— variegatum, 139, 143, 435.
Trochilus alexandri, 270.
—— colubris, 270, 275, 288.
Troglodytes aedon, 270.
—— borealis, 281, 282.
—— brunneicollis, 372.
—— parkmanni, 270.
—— parvulus, 427.
—— solstitialis, 372.
Trogon erythronotus, 246.
Tryngites rufescens, 284, 285.
Turdus aliciæ, 275.
—— amaurotis, 199.
—— cardis, 199.
—— canorus, 5.
—— chrysolaus, 199.
—— cinclus, 113.
—— daulias, 199.
—— diardi, 381, 382.
—— fuscescens, 270, 272, 274, 275.
—— gularis, 113.
—— hodgsoni, 143.
—— iliacus, 281.
—— javanicus, 325.
—— luzoniensis, 11.
—— manillensis, 199.
—— merula, 281, 282, 426.
—— migratorius, 275, 285, 288.
—— minor, 283.
—— modestus, 325.

Turdus musicus, 5,58,238, 426.
—— mustelinus, 275, 288.
—— nævius, 266.
—— nanus, 270.
—— pallasi, 270, 285.
—— pilaris, 103, 281.
—— rufulus, 325.
—— swainsoni, 272, 273, 275, 285, 288.
—— torquatus, 426.
—— ustulatus, 270.
—— vanikorensis, 303.
—— viscivorus, 426.
—— wilsoni, 18.
—— xanthosceles, 304.
Turnix dussumieri, 161, 162.
—— joudera, 161.
—— maculosa, 161, 162.
—— ocellata, 160.
—— pugnax, 161, 162, 309.
—— rostrata, 232.
—— rufescens, 161, 162.
—— sykesi, 161.
—— sylvatica, 428.
—— taigoor, 161.
—— tanki, 161, 162.
Turtur ægyptiacus, 150.
—— auritus, 67, 149, 151, 248.
—— cambayensis, 150.
—— chinensis, 150, 396.
—— humilis, 151, 332.
—— meena, 149.
—— orientalis, 150.
—— picturatus, 346, 354, 359.
—— risorius, 67, 151.
—— rostratus, 337, 354, 359.
Turtur rupicola, 149, 150, 204, 396.
—— semitorquatus, 151.
—— senegalensis, 67.
—— suratensis, 150.
—— tigrinus, 150.
Tyrannula pusilla, 283.
Tyrannus antillarum, 129.
—— carolinensis, 272, 273, 275, 288.
—— dominicensis, 273, 275, 280.
—— magnirostris, 108.
—— melancholicus, 107.
—— rostratus, 108.
—— satrapa, 107.
—— verticalis, 107.
—— vociferans, 127.

Upupa epops, 56, 100, 135, 143, 236, 425.
Uragus sanguinolentus, 203.
Uria antiqua, 194, 209.
—— columba, 271.
—— grylle, 271.
—— troile, 249.
Urocissa cærula, 37.
—— magnirostris, 37.
—— sinensis, 37, 407.
Urubitinga anthracina, 107.
—— schistacea, 107.

Vanellus aralensis, 165.
—— cristatus, 68, 282, 399, 429.
—— flavipes, 165.
Vinago sieboldi, 204.
Vireo barbatula, 264, 276.
—— flavifrons, 276.
—— gilvus, 270.
—— noveboracensis, 276, 287, 289.
Vireo olivaceus, 266, 272, 273, 276, 283, 285.
—— plumbeus, 131, 247.
—— pusillus, 131.
—— solitarius, 247, 276.
—— swainsoni, 270.
—— vicinior, 131.
Vireolanius melitophrys, 123.
—— pulchellus, 123.
Vultur fulvus, 423.
—— monachus, 50, 413.

Xanthocephalus icterocephalus, 276, 283.
Xanthodina flavigula, 42.
Xantholæma rubricapilla, 297.
Xanthomyza phrygia, 133.
Xema brunneicephala, 177.
—— sabinii, 283, 284, 285.
Xipholena atropurpurea, 123.
Xiphorhamphus superciliaris, 4, 433.

Yuhina occipitalis, 33.
—— pyrrhoura, 33.

Zenaidura carolinensis, 276, 289.
Zonotrichia gambeli, 266, 270, 283.
—— leucophrys, 270, 272, 283.
Zosterops flavus, 33.
—— modesta, 345, 346, 359.
—— palpebrosus, 33, 328.
—— poliogastra, 354.
—— semiflava, 354, 359.
—— siamensis, 34.

THE END.

Printed by TAYLOR and FRANCIS, Red Lion Court, Fleet Street.

NEW SERIES.
VOL. III. No. 9. JANUARY 1867. *Price 6s.*

THE IBIS,

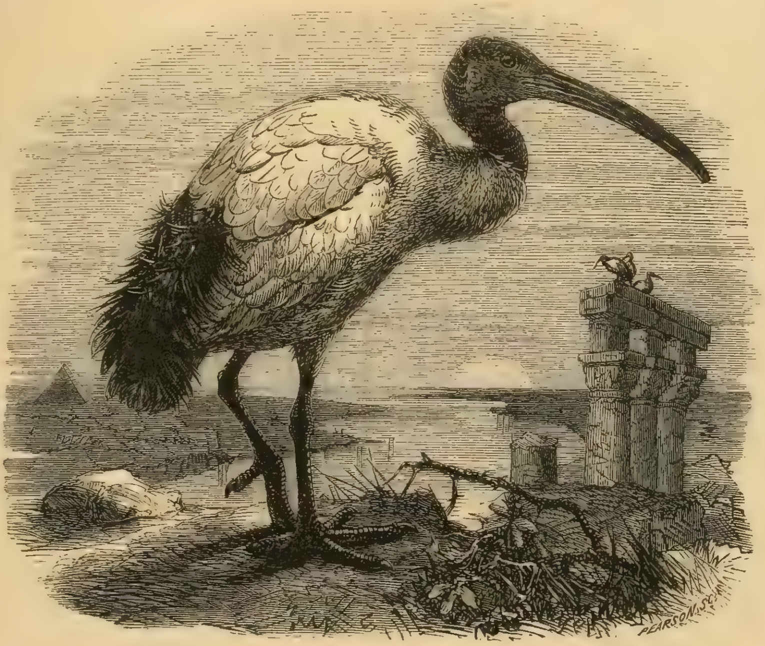
A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

ALFRED NEWTON, M.A.,

PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY
IN THE UNIVERSITY OF CAMBRIDGE,
F.L.S., F.Z.S., ETC., ETC.



LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31st March 1867, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

THE IBIS,

A MAGAZINE OF GENERAL ORNITHOLOGY.

EDITED BY
PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY OF THE ZOOLOGICAL SOCIETY OF LONDON, ETC.

Vol. I. 1859. 490 pp., 15 Plates (out of print).
II. 1860. 438 pp., 15 Plates, price £1 6*s*.
III. 1861. 430 pp., 12 Plates, price £1 6*s*.
IV. 1862. 404 pp., 13 Plates, price £1 6*s*.
V. 1863. 498 pp., 13 Plates, price £1 6*s*.
VI. 1864. 440 pp. and a General Index, 10 Plates, price £1 6*s*.

The First Series of this periodical is now finished, in Six Volumes. Purchasers wishing to complete their sets are requested to apply to the Publishers,

Messrs. Trübner and Co., 60 Paternoster Row, London, E.C.

NEW SERIES OF THE IBIS.
Annual Subscription, payable before 31st March, £1 1*s*.

THE IBIS,

A QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY
ALFRED NEWTON, M.A.,
PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY IN THE UNIVERSITY OF CAMBRIDGE, F.L.S., F.Z.S., ETC.

Vol. I. 1865. 566 pp., 11 Plates, price £1 6*s*.
II. 1866. 440 pp., 11 Plates, price £1 6*s*.

Communications may be addressed to the Editor, Professor Newton, Magdalene College, Cambridge. Books for Review, Subscriptions, Advertisements, &c., to the Publisher,

John Van Voorst, 1, Paternoster Row, London, E.C.

Single Numbers will be charged 6*s*. each.

Just published.

THE BIRDS OF NORFOLK.

BY
HENRY STEVENSON, F.L.S.

Vol. I. (to be completed in 2 vols.) Demy 8vo, pp. 445, price 10*s*. 6*d*.
With a frontispiece and coloured plate by Wolf.

THE BIRDS OF MIDDLESEX.

A CONTRIBUTION TOWARDS THE NATURAL HISTORY OF THE COUNTY.

BY
JAMES EDMUND HARTING, F.Z.S.
Post 8vo, with a frontispiece, 7*s*. 6*d*.

A NATURALIST'S RAMBLE TO THE ORCADES

BY
A. W. CRICHTON, B.A., F.L.S, F.Z.S.
Fcap. 8vo, 4*s*.

John Van Voorst, 1 Paternoster Row, London, E.C.

Ornithological Work in Preparation.

EXOTIC ORNITHOLOGY.

BY

PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S. etc.,

AND

OSBERT SALVIN, M.A., F.L.S., F.Z.S., etc.

Under this title has been commenced the issue of a series of coloured lithographic illustrations of New or hitherto Unfigured Birds.

To the description of each species figured the authors endeavour to add a complete list of the other known species of the Genus; so that the letterpress will consist of a series of monographic essays.

The First Series of this work will contain One Hundred Plates. It will be published in Twelve Parts, at intervals of about two months. Each Part will contain *eight coloured* plates and two sheets of letterpress. A Thirteenth Part will contain the four last plates and the Title and Index to the Volume.

The price of each Part in Imperial 4to will be £1 1*s*., to be paid for as the work comes out. Only *two hundred* copies of the work in Imperial 4to will be prepared. *Twenty-five* copies will be printed on Large Paper to match the Large-Paper Issues of Temminck and Des Murs. The subscription price of these copies will be, each Part £2 2*s*.

Intending Subscribers are requested to apply to the Publisher, Mr. B. Quaritch, 15 Piccadilly, London, W.

Illustrated by Ten Coloured and Eight Tinted Plates, royal 8vo, price £1 11*s*. 6*d*.,
Part I. (containing Accipitres) of

OOTHECA WOLLEYANA:

AN ILLUSTRATED AND DESCRIPTIVE CATALOGUE

OF THE COLLECTION OF BIRDS' EGGS FORMED BY
THE LATE JOHN WOLLEY, Jun., M.A., F.Z.S.

Edited from the original notes
By ALFRED NEWTON, M.A., F.L.S.

⁂ *Part II. is in preparation.*

THE RECORD OF ZOOLOGICAL LITERATURE

FOR THE YEAR 1865 (Vol. II.). 8vo, 808 pp., 30*s*.

EDITED BY

Dr. ALBERT C. L. G. GÜNTHER.

This *second* volume consists of 798 pages, containing *résumés* of about 35,000 pages of the Zoological Literature of 1865, with references to more than 7000 species described as new. The Ornithological portion by Professor Newton.

John Van Voorst, 1 Paternoster Row, London, E.C.

CONTENTS OF NUMBER IX.—NEW SERIES.

Page

I. The Ornithology of India.—A Commentary on *Dr. Jerdon's* 'Birds of India.' By Edward Blyth, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc. 1

II. Egypt Revisited. By E. Cavendish Taylor, M.A., F.Z.S. 48

III. On the Ornithology of Palestine. (Part V.) By the Rev. H. B. Tristram, M.A., F.L.S., C.M.Z.S. (Plate I.) 73

IV. A Month in Tripoli. By W. T. H. Chambers 97

V. Remarks on *Dr. Léotaud's* 'Birds of Trinidad.' By P. L. Sclater, M.A., F.R.S. &c. 104

VI. On the Genus *Cinclus*. By Osbert Salvin, M.A., F.L.S., F.Z.S., &c. (Plate II.) 109

VII. Notices of Recent Ornithological Publications:—

1. *English*:—Sclater and Salvin's 'Exotic Ornithology,' part i.; Harting's 'Birds of Middlesex;' Crichton's 'Naturalist's Ramble to the Orcades;' King's 'Sportsman and Naturalist in Canada;' Lord's 'Naturalist in Vancouver Island and British Columbia' 123

2. *French*:—Mulsant's 'Essai d'une Classification Méthodique des Trochilidées;' Pollen's 'Mémoires Scientifiques' 126

3. *American*:—Bryant on Birds of Porto Rico; Weiz on Vertebrates of Labrador; Lawrence on New Birds from Central and South America; Coues on the Ornithology of Arizona and 'Review of the Family *Procellariidæ*' 129

4. *Australasian*:—Buller's 'Essay on the Ornithology of New Zealand;' Ramsay on Australian Oology 131

VIII. Letters, Announcements, &c.:—

Letters from Mr. E. P. Ramsay, Dr. D. Scott, Capt. Beavan, Messrs. H. J. Elwes and D. Mackay, and Dr. Barron; Further Discovery of Didine Bones in Rodriguez; Demand for Vol. I. of 'The Ibis' 134

Covers for binding last year's Volume may be had on application to the Publisher, at 1*s.* 4*d.* each.

Communications may be addressed to the Editor, Professor Newton, Magdalene College, Cambridge. Books for Review, Subscriptions, Advertisements, &c., to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

NEW SERIES.
VOL. III. No. 10.
APRIL 1867.
Price 6s.

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

ALFRED NEWTON, M.A.,
PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY
IN THE UNIVERSITY OF CAMBRIDGE,
F.L.S., F.Z.S., ETC., ETC.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31*st March* 1867, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

THE IBIS,

A MAGAZINE OF GENERAL ORNITHOLOGY.

EDITED BY
PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY OF THE ZOOLOGICAL SOCIETY OF LONDON, ETC.

Vol. I. 1859. 490 pp., 15 Plates (out of print).
II. 1860. 438 pp., 15 Plates, price £1 6*s*.
III. 1861. 430 pp., 12 Plates, price £1 6*s*.
IV. 1862. 404 pp., 13 Plates, price £1 6*s*.
V. 1863. 498 pp., 13 Plates, price £1 6*s*.
VI. 1864. 440 pp. and a General Index, 10 Plates, price £1 6*s*.

The First Series of this periodical is now finished, in Six Volumes. Purchasers wishing to complete their sets are requested to apply to the Publishers,

Messrs. Trübner and Co., 60 Paternoster Row, London, E.C.

Annual Subscription, payable before 31st March, £1 1*s*.

THE IBIS,

A QUARTERLY JOURNAL OF ORNITHOLOGY.

NEW SERIES.

EDITED BY
ALFRED NEWTON, M.A.,
PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY IN THE UNIVERSITY OF CAMBRIDGE, F.L.S., F.Z.S., ETC.

Vol. I. 1865. 566 pp., 11 Plates, price £1 6*s*.
II. 1866. 440 pp., 11 Plates, price £1 6*s*.

Communications may be addressed to the Editor, Professor Newton, Magdalene College, Cambridge. Books for Review, Subscriptions, Advertisements, &c., to the Publisher,

John Van Voorst, 1, Paternoster Row, London, E.C.

Single Numbers will be charged 6*s*. each.

Just published.

THE BIRDS OF NORFOLK.

BY
HENRY STEVENSON, F.L.S.

Vol. I. (to be completed in 2 vols.) Demy 8vo, pp. 445, price 10*s*. 6*d*.
With a frontispiece and coloured plate by Wolf.
John Van Voorst, 1 Paternoster Row, London, E.C.

THE NORTH-WEST PENINSULA OF ICELAND:

BEING THE JOURNAL OF A TOUR IN ICELAND IN THE SPRING AND SUMMER OF 1862.

BY
C. W. SHEPHERD, M.A., F.Z.S.

Fcap. 8vo, with a Map and Two Chromo-lithographs, 7*s*. 6*d*.
London: Longmans, Green, & Co.

BONES OF THE DODO (*Didus ineptus*) FROM MAURITIUS.

Mr. E. HIGGINS (successor to Mr. SAMUEL STEVENS), 24 Bloomsbury Street, London, W.C., has on sale *two very fine sets* of Dodos' bones, including sternum and sacrum, received from George Clark, Esq., of Mauritius, the discoverer of these interesting relics. (*Vide* 'Ibis,' 1866, p. 141, and Prof. Owen's 'Memoir on the Dodo,' recently published.)

Price of each set £15. Further details supplied on application.

Ornithological Works now Publishing.

Recherches Anatomiques et Paléontologiques pour servir à l'histoire des

OISEAUX FOSSILES
DE LA FRANCE.

PAR

M. ALPHONSE MILNE-EDWARDS,

PROFESSEUR DE ZOOLOGIE A L'ECOLE SUPÉRIEURE DE PHARMACIE, AIDE-NATURALISTE AU MUSÉUM D'HISTOIRE NATURELLE, ETC.

Cet ouvrage se composera de deux volumes de texte, format grand in-4⁰ et d'un Atlas d'environ 200 planches lithographiées, même format. Il paraîtra par livraisons de 2 ou 3 feuilles de texte et de 5 planches.

Prix de la livraison: 5 francs, et de l'ouvrage complet, pour les souscripteurs: 200 francs.

Paris: Victor Masson et Fils, Place de l'Ecole de Médecine.

EXOTIC ORNITHOLOGY.

BY

PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S. ETC.,

AND

OSBERT SALVIN, M.A., F.L.S., F.Z.S., ETC.

Under this title has been commenced the issue of a series of COLOURED lithographic illustrations of New or hitherto Unfigured Birds.

To the description of each species figured the authors endeavour to add a complete list of the other known species of the Genus; so that the letterpress will consist of a series of monographic essays.

The First Series of this work will contain One Hundred Plates. It will be published in Twelve Parts, at intervals of about two months. Each Part will contain *eight coloured* plates and two sheets of letterpress. A Thirteenth Part will contain the four last plates and the Title and Index to the Volume.

The price of each Part in Imperial 4to will be £1 1*s.*, to be paid for as the work comes out. Only *two hundred* copies of the work in Imperial 4to will be prepared. *Twenty-five* copies will be printed on Large Paper to match the Large-Paper Issues of Temminck and Des Murs. The subscription price of these copies will be, each Part £2 2*s.*

Intending Subscribers are requested to apply to the Publisher, Mr. B. Quaritch, 15 Piccadilly, London, W.

THE RECORD OF ZOOLOGICAL LITERATURE
FOR THE YEAR 1865 (Vol. II.). 8vo, 808 pp., 30*s.*

EDITED BY

Dr. ALBERT C. L. G. GÜNTHER.

This *second* volume consists of 798 pages, containing *résumés* of about 35,000 pages of the Zoological Literature of 1865, with references to more than 7000 species described as new. The Ornithological portion by Professor Newton.

John Van Voorst, 1 Paternoster Row, London, E.C.

CONTENTS OF NUMBER X.—NEW SERIES.

Page

IX. The Ornithology of India.—A Commentary on *Dr. Jerdon's* 'Birds of India.' By Edward Blyth, late Curator of the Museum of the Asiatic Society at Calcutta, Hon. Mem. As. Soc. 147

X. Notes on the Birds seen during a Voyage from London to New Zealand in 1866. By Captain F. W. Hutton, F.G.S. 185

XI. Notes on Birds collected near Hakodadi in Northern Japan. By Henry Whitely, Junior. (Plate III.) 193

XII. On the Rufous-tailed Shrikes. By Viscount Walden, F.Z.S. (Plates V. & VI.) 211

XIII. Jottings on Birds from my Amoy Journal. By Robert Swinhoe, Her Majesty's Consul, F.Z.S. &c. 226

XIV. Notices of Recent Ornithological Publications:—

1. *English*:—Gould's 'Birds of Great Britain,' parts ix. and x.; Stevenson's 'Birds of Norfolk,' vol. i.; Colquhoun's 'Sporting Days;' Shepherd's 'North-west Peninsula of Iceland;' Grant's 'Birds found in Malta and Gozo' 237
2. *French*:—Gerbe's edition of Degland's 'Ornithologie Européenne;' Alphonse Milne-Edwards's 'Oiseaux Fossiles de la France;' Geoffroy on *Lophophorus l'huysi* 240
3. *Dutch and Belgian*:—Ornithological papers in the 'Nederlandsch Tijdschrift voor de Dierkunde;' De la Fontaine's 'Faune du Pays de Luxembourg;' 'Archives Cosmologiques' 243
4. *German*:—Hartlaub's 'Einleitung zur Ornithologie der Viti-, Samoa- und Tonga-Gruppe;' Von Müller's 'Reisen in Mexico;' Dieck 'De Sterno Avium' . . . 245
5. *American*:—Lawrence on New Birds; Coues on the Ornithology of Arizona (second notice) 247

XV. Letters, Announcements, &c.:—

Letters from Dr. Cullen, Capt. Orde, Messrs. E. L. Layard, John Hancock, J. H. Gurney, and P. L. Sclater; Prof. Huxley's Lectures on the Classification of Birds; The Question of Priority in the Publication of Names; Announcement of Mr. Robert Gray's 'Birds of the West of Scotland;' Deaths of Drs. Léotaud and Bryant, and of Mr. Selby 247

Covers for binding last year's Volume may be had on application to the Publisher, at 1*s*. 4*d*. each.

Communications may be addressed to the Editor, Professor Newton, Magdalene College, Cambridge. Books for Review, Subscriptions, Advertisements, &c., to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

NEW SERIES.
VOL. III. No. 11.

JULY 1867.

Price 6s.

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

ALFRED NEWTON, M.A.,

PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY
IN THE UNIVERSITY OF CAMBRIDGE,
F.L.S., F.Z.S., ETC., ETC.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31*st March* 1867, £1 1*s*.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

THE IBIS,

A MAGAZINE OF GENERAL ORNITHOLOGY.

EDITED BY
PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY OF THE ZOOLOGICAL SOCIETY OF LONDON, ETC.

Vol. I. 1859. 490 pp., 15 Plates (out of print).
II. 1860. 438 pp., 15 Plates, price £1 6*s*.
III. 1861. 430 pp., 12 Plates, price £1 6*s*.
IV. 1862. 404 pp., 13 Plates, price £1 6*s*.
V. 1863. 498 pp., 13 Plates, price £1 6*s*.
VI. 1864. 440 pp. and a General Index, 10 Plates, price £1 6*s*.

THE First Series of this periodical is now finished, in Six Volumes. Purchasers wishing to complete their sets are requested to apply to the Publishers,

Messrs. Trübner and Co., 60 Paternoster Row, London, E.C.

Annual Subscription, payable before 31st March, £1 1*s*.

THE IBIS,

A QUARTERLY JOURNAL OF ORNITHOLOGY.

NEW SERIES.

EDITED BY
ALFRED NEWTON, M.A.,
PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY IN THE UNIVERSITY OF CAMBRIDGE, F.L.S., F.Z.S., ETC.

Vol. I. 1865. 566 pp., 11 Plates, price £1 6*s*.
II. 1866. 440 pp., 11 Plates, price £1 6*s*.

Communications may be addressed to the EDITOR, Professor NEWTON, Magdalene College, Cambridge. Books for Review, Subscriptions, Advertisements, &c., to the Publisher,

John Van Voorst, 1, Paternoster Row, London, E.C.

Single Numbers will be charged 6*s*. each, until three months after the date of publication, after which the price will be advanced to 7*s*. 6*d*.

Recently published.

THE BIRDS OF NORFOLK.

BY

HENRY STEVENSON, F.L.S.

Vol. I. (to be completed in 2 vols.) Demy 8vo, pp. 445, price 10*s*. 6*d*.
With a frontispiece and coloured plate by WOLF.
John Van Voorst, 1 Paternoster Row, London, E.C.

THE NORTH-WEST PENINSULA OF ICELAND:

BEING THE JOURNAL OF A TOUR IN ICELAND IN THE SPRING AND SUMMER OF 1862.

BY

C. W. SHEPHERD, M.A., F.Z.S.

Fcap. 8vo, with a Map and Two Chromo-lithographs, 7*s*. 6*d*.
London: Longmans, Green, & Co.

BONES OF THE DODO (*Didus ineptus*) FROM MAURITIUS.

MR. E. HIGGINS (successor to MR. SAMUEL STEVENS), 24 BLOOMSBURY STREET, LONDON, W.C., has on sale *two very fine sets* of Dodos' bones, including sternum and sacrum, received from GEORGE CLARK, Esq., of Mauritius, the discoverer of these interesting relics. (*Vide* 'Ibis,' 1866, p. 141, and Prof. Owen's 'Memoir on the Dodo,' recently published.)

Price of each set £15. Further details supplied on application.

Ornithological Works now Publishing.

Recherches Anatomiques et Paléontologiques pour servir à l'histoire des

OISEAUX FOSSILES

DE LA FRANCE.

PAR

M. ALPHONSE MILNE-EDWARDS,

PROFESSEUR DE ZOOLOGIE À L'ECOLE SUPÉRIEURE DE PHARMACIE, AIDE-NATURALISTE AU MUSÉUM D'HISTOIRE NATURELLE, ETC.

Cet ouvrage se composera de deux volumes de texte, format grand in-4⁰ et d'un Atlas d'environ 200 planches lithographiées, même format. Il paraîtra par livraisons de 2 ou 3 feuilles de texte et de 5 planches.

Prix de la livraison : 5 francs, et de l'ouvrage complet, pour les souscripteurs : 200 francs.

Paris : Victor Masson et Fils, Place de l'Ecole de Médecine.

EXOTIC ORNITHOLOGY.

BY

PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S. ETC.,

AND

OSBERT SALVIN, M.A., F.L.S., F.Z.S., ETC.

Under this title has been commenced the issue of a series of COLOURED lithographic illustrations of NEW or hitherto UNFIGURED Birds.

To the description of each species figured the authors endeavour to add a complete list of the other known species of the Genus; so that the letterpress will consist of a series of monographic essays.

The First Series of this work will contain ONE HUNDRED PLATES. It will be published in Twelve Parts, at intervals of about two months. Each Part will contain *eight coloured* plates and two sheets of letterpress. A Thirteenth Part will contain the four last plates and the Title and Index to the Volume.

The price of each Part in Imperial 4to will be £1 1*s*., to be paid for as the work comes out. Only *two hundred* copies of the work in Imperial 4to will be prepared. *Twenty-five* copies will be printed on Large Paper to match the Large-Paper Issues of Temminck and Des Murs. The subscription price of these copies will be, each Part £2 2*s*.

Intending Subscribers are requested to apply to the Publisher, Mr. B. QUARITCH, 15 Piccadilly, London, W.

In the Press.

THE RECORD OF ZOOLOGICAL LITERATURE

FOR THE YEAR 1866 (Vol. III.). 8vo, 30*s*.

EDITED BY

DR. ALBERT C. L. G. GÜNTHER.

The Ornithological portion by Professor NEWTON.

John Van Voorst, 1 Paternoster Row, London, E.C.

Books on Ornithology published by Mr. Van Voorst.

Annual Subscription, payable before 31st March, £1 1*s.*

THE IBIS,

A QUARTERLY JOURNAL OF ORNITHOLOGY.
NEW SERIES.
EDITED BY
ALFRED NEWTON, M.A.,
PROFESSOR OF ZOOLOGY AND COMPARATIVE ANATOMY IN THE UNIVERSITY OF CAMBRIDGE, F.L.S., F.Z.S., ETC.

Vol. I. 1865. 566 pp., 11 Plates, price £1 6*s.*
II. 1866. 440 pp., 11 Plates, price £1 6*s.*

Communications may be addressed to the Editor, Professor Newton, Magdalene College, Cambridge. Books for Review, Subscriptions, Advertisements, &c., to the Publisher.

Single Numbers will be charged 6*s.* each until three months after the date of publication, after which the price will be advanced to 7*s.* 6*d.*

In a few days in 8vo, price 30*s.*, Vol. III. of

THE RECORD OF ZOOLOGICAL LITERATURE

FOR THE YEAR 1866.
EDITED BY
Dr. ALBERT C. L. G. GÜNTHER.

The Ornithological portion by Professor Newton.

Vol. I. (to be completed in 2 vols.), Demy 8vo, pp. 445, price 10*s.* 6*d.*
With Two Illustrations by Wolf.

THE BIRDS OF NORFOLK.

By HENRY STEVENSON, F.L.S.

8vo, sewed, price 6*d.*

A SUMMARY OF THE OCCURRENCES OF THE GREY PHALAROPE IN GREAT BRITAIN DURING THE AUTUMN OF 1866.

By J. H. GURNEY, Jun.

Royal 8vo, cloth, price 7*s.* 6*d.*

A DESCRIPTIVE CATALOGUE OF THE RAPTORIAL BIRDS IN THE NORFOLK AND NORWICH MUSEUM.

By JOHN HENRY GURNEY.

Part I., containing Serpentariidæ, Polyboridæ, Vulturidæ.

Post 8vo, pp. 272, price 7*s.* 6*d.*, with Lithograph Frontispiece by Wolf.

THE BIRDS OF MIDDLESEX.

A CONTRIBUTION TOWARDS THE NATURAL HISTORY OF THE COUNTY.

By JAMES EDMUND HARTING, F.Z.S.

Price 7*s.* 6*d.*, a Third Edition of

ORNITHOLOGICAL RAMBLES IN SUSSEX,

WITH A CATALOGUE OF THE BIRDS OF THAT COUNTY, AND REMARKS ON THEIR LOCAL DISTRIBUTION.

By A. E. KNOX, M.A., F.L.S., F.Z.S.

Royal 4to, with Eighteen Plates and numerous other Illustrations, price £1 1*s.*

THE DODO AND ITS KINDRED.

OR, THE HISTORY, AFFINITIES, AND OSTEOLOGY OF THE DODO, SOLITAIRE, AND OTHER EXTINCT BIRDS OF THE ISLANDS MAURITIUS, RODRIGUEZ, AND BOURBON.

By H. E. STRICKLAND, M.A., F.R.G.S., F.G.S., etc., and A. G. MELVILLE, M.D., M.R.C.S., etc.

⁂ Owing to the pressure on our space, the prescribed limits of which we have already exceeded, we are compelled to postpone for the present our usual "Notices of Recent Ornithological Publications," among which are those of the following:—

1. *English*:—Eyton's 'Osteologia Avium;' Sclater's edition of Nitzsch's 'Pterylography,' translated by Dallas; G. R. Gray's 'Catalogue of *Gallinæ*;' Rodd's 'Ornithology of Cornwall;' Bullmore's 'Cornish Fauna;' J. H. Gurney, jun., on Occurrences of the Grey Phalarope.
2. *French*:—Verreaux on New Birds; Ornithological papers in the 'Revue de Zoologie.'
3. *Swiss*:—'Bulletin de la Société Ornithologique Suisse,' vol. i. part 2.
4. *Italian*:—Cara's 'Osservazione al Catalogo dal Dottore Salvadori;' Bettoni's 'Uccelli che nidificano in Lombardia,' parts 1–15.
5. *German*:—Finsch and Hartlaub, 'Ornithologie der Viti-, Samoa- und Tonga-Inseln;' Hoffmann's 'Die Waldschnepfe.'
6. *Dutch and Belgian*:—Schlegel's 'Muséum des Pays-Bas,' part 9; Finsch's 'Die Papageien;' 'Archives Cosmologiques.'
7. *Norwegian and Swedish*:—Collett's 'Observationer fra Hvalöerne;' Holmgren's 'Skandinaviens Foglar,' vol. i.; Westerlund's 'Skandinavisk Oologi.'
8. *American*:—Jackson on the habits of *Melanerpes formicivorus*; Cassin's 'Third Study of the *Icteridæ*;' Lawrence on New American Birds and on New *Trochilidæ*.
9. *Australian*:—Diggles's 'Ornithology of Australia,' parts i. to x.

Nearly Ready.

THE BIRDS OF SOUTH AFRICA.

A DESCRIPTIVE CATALOGUE OF ALL THE KNOWN SPECIES OCCURRING SOUTH OF THE TWENTY-EIGHTH PARALLEL OF LATITUDE.

BY

EDGAR LEOPOLD LAYARD, F.Z.S.,

CURATOR OF THE SOUTH AFRICAN MUSEUM, ETC.

The study of the Birds of Southern Africa is beset with very great difficulty. No work gives even a bare catalogue of their names; and the descriptions of the various species inhabiting the Cape Colony are scattered through many different publications, some so expensive as to be beyond the reach of ordinary collectors, while others are journals extending over a long series of years.

In size the 'Birds of South Africa' will be similar to Mr. Trimen's '*Rhopalocera Africæ Australis*,' so as to form with it and contemplated works on the *Reptilia*, &c., a complete South-African Fauna.

London: Longmans; Trübner.

Just Published.

BEITRAG ZUR FAUNA CENTRALPOLYNESIENS.

ORNITHOLOGIE DER VITI-, SAMOA- UND TONGA-INSELN.

VON O. FINSCH UND G. HARTLAUB.

Large 8vo. Fourteen Coloured Plates. 290 pages. 24*s*.

Halle: Schmidt. London: Asher and Co., Bedford Street, Covent Garden.

CONTENTS OF NUMBER XII.—NEW SERIES.

Page

XXIII. Jottings on Birds from my Amoy Journal. By Robert Swinhoe, Her Majesty's Consul, F.Z.S. &c. 385

XXIV. Illustrations of Australian Oology. By Edward P. Ramsay, C.M.Z.S. (Plates VIII. and IX.) 413

XXV. Notes on the Birds of Tangier and Eastern Morocco. By C. F. Tyrwhitt Drake 421

XXVI. Notes on Various Indian Birds. By R. C. Beavan, Capt. Bengal Staff Corps, C.M.Z.S. (Plate X.) 430

XXVII. Letters, Announcements, &c.:—

Letters from Messrs. E. P. Ramsay, E. L. Layard, W. T. Blanford, J. H. Gurney and H. B. Tristram, Lord Walden and Messrs. J. E. Harting and A. C. Smith; Extract from a letter of Mr. Allan Hume, C.B.; Deaths of Prince Maximilian of Wied and Mr. John Macgillivray 456

Index 473

Title-page, Preface, Contents, &c.

Covers for binding last year's Volume may be had on application to the Publisher, at 1*s.* 4*d.* each.

Communications may be addressed to the Editor, Professor Newton, Magdalene College, Cambridge. Books for Review, Subscriptions, Advertisements, &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

The Ibis 1867 Vol.3 New Series

THE HECKMAN BINDERY INC.
BOUND TO PLEASE
APR 69
N. MANCHESTER,
INDIANA

AMNH LIBRARY
100047059